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April 22, 1985

Honorable Crane Winton
1307 Mount Curve Avenue
Minneapolis, Minnesota 55403

Re: U.S.A., et al. v. Reilly Tar & Chemical
Corporation, et al.
File No. Civ. 4-80-469

Dear Judge Winton:

This letter serves as Reilly Tar & Chemical Corporation's motion to compel certain discovery responses. Our motion concerns the attorney-client and deliberative process privileges asserted by the government. For purposes of presenting our arguments to the Court, we have addressed these discovery disputes separately, although discussions throughout this motion have relevance to the underlying issue of whether the privileges have been wrongfully asserted.

1. REILLY TAR & CHEMICAL CORPORATION'S MOTION TO COMPEL ANSWERS TO DEPOSITION QUESTIONS.

BACKGROUND

The case management order provides for the deposition of designated fact and expert witnesses. The parties accordingly, have exchanged summaries of the expected testimony of their experts and have proceeded through a rigorous deposition schedule.

At the outset, Reilly notes for the court that summaries from the plaintiffs' experts indicate that several witnesses will testify at trial concerning the record of decision (ROD), the remedial action plan (RAP), and other aspects of the government's remedy. However, during Reilly's recent examination into these

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areas of "expected testimony," plaintiffs' counsel have objected or have otherwise disrupted the depositions by asserting (vaguely at times) the deliberative process privilege.

Specifically, Reilly requests the Court to compel responses of questions posed to Messrs. Stephen Riner and Paul Bitter. Furthermore, Reilly requests a clarification from the Court as to the proper application of this qualified privilege. Reilly believes that the plaintiffs' assertion of privilege requires close scrutiny, especially when the privilege is raised to limit testimony from designated experts.

A. REILLY IS ENTITLED TO DISCOVERY CONCERNING THE RECORD OF DECISION, THE REMEDIAL ACTION PLAN AND OTHER ASPECTS OF THE GOVERNMENT'S REMEDY.

Under the Federal Rules of Civil Procedure, discovery is broadly drawn to include anything which is relevant to the subject matter of the case, including anything that may lead to the discovery of admissible evidence. Fed. R. Civ. Pro. 26(b). The parties to this lawsuit have agreed, under a case management order, to initially limit this litigation to the issues of liability under RCRA or CERCLA and the appropriateness of any remedy. Reilly has steadfastly argued that even if it is found liable under provisions of RCRA OR CERCLA, the remedy proposed by the government is not in accordance with the requirements set forth under the statutes (i.e., not "appropriate or cost-effective"). Consequently, Reilly has focused its inquiry during deposition on the basis for the government's remedy. The United States has designated Paul Bitter as the spokesperson who could explain the factors considered by the EPA in establishing the ROD. Steve Riner shares a similar designation for the State of Minnesota. Yet both of these witnesses were repeatedly instructed not to answer various questions on grounds of the deliberative process privilege.

We will discuss the existence and applicability of a so-called deliberative process privilege in connection with the government's designation of certain privileged documents. See infra, page 18. In that regard, we note that the deliberative process privilege is narrowly construed. We cite numerous cases which suggest that the court should balance the need to afford governmental administrators freedom in their deliberations and the needs warranted by discovery principles under the rules of procedure. This is not a case in which Reilly is probing state secrets or materials of national concern. Reilly is defending an action brought against it by the United States and the intervening plaintiffs. Inseparable from this action is the remedy issue. The government has issued a ROD which addresses its recommended remedy. That remedy differs in substantial part from the remedy

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proposed by consultants such as Environmental Research & Technology and other respected members of the scientific community. Reilly believes it is entitled to explore through discovery the differences in proposed remedies and further, to explore the basis of the government's remedy and the understanding of the government's experts concerning the remedy.

In particular, Reilly would like to direct the Court's attention to the following passages in the Bitter and Riner depositions wherein the witnesses were instructed not to answer:*

Bitter Deposition

[pp. 57-60]

Q. Now, you said that several other people have helped you. One of them that you mentioned was Michael Hansel. Did he write portions of Exhibit 624?

A. I don't know if he wrote portions of this Exhibit.

Q. What contributions did he make?

A. He and Steve Reiner reviewed a draft of the Record of Decision and did provide some writing. I'm not sure whose writing it was.

Q. Do you still have these writings in your office in Chicago?

A. I don't believe so.

Q. What can you tell us about what contributions they made?

MR. HIRD: I object to the question. As I mentioned before, that specific individuals have contributed to the Record of Decision I believe is not discoverable. You

* Reilly encloses copies of the Bitter and Riner depositions for the Court's review. Because this letter is rather lengthy, we have not quoted all of the portions of these depositions which reflect the objections accompanied by instructions not to answer. We respectfully request the Court to examine the entire depositions, especially the Bitter deposition commencing at page 50. We refer the Court to Exhibit A-1 for specific references to the objectionable assertions of privilege. Furthermore, Reilly would like the Court to note the excessive number of objections interjected by plaintiffs' counsel. This disruptive approach by plaintiffs' counsel has been commonplace.

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can find out who was involved and you can ask what the Record of Decision --

MR. SHAKMAN: I join in the objection.

MR. SCHWARTZBAUER: I hear your objection on that, David. I think that's something that we take issue with, and we do intend to bring that up before Special Master Winton if you're going to give him an instruction not to answer my questions with respect to that.

MR. HIRD: I told you last summer that this would be how I would conduct this deposition, and I had assumed that you had agreed to the matter in which this deposition would be conducted. I am only now for the first time apprised that a dispute that could have been resolved that summer is still involved.

MR. SCHWARTZBAUER: You made an erroneous assumption, David, and I'm just trying to tell you that we don't agree with your position. And we think we're entitled to cross-examine the witness fully and adequately concerning the Record of Decision. And I intend to ask him questions on that. If you want to instruct him not to answer that's fine.

MR. HIRD: I will instruct him not to answer in accordance with what I understood our agreement to be.

MR. SCHWARTZBAUER: There has never been any agreement on this, David. If you think there is an agreement on that, I'd like you to produce the agreement.

MR. HIRD: I can go locate the correspondence between Mr. Wahoske and myself.

MR. SCHWARTZBAUER: Okay. Are you instructing him not to answer?

MR. HIRD: I'm instructing him not to answer.

MR. SHAKMAN: Excuse us a moment.

(At this time a recess was held.)

MR. SCHWARTZBAUER: Okay. It's my intention to ask him about the contributions made by Mr. Hansel, Mr. Reiner, Mr. Bixler, and Mr. Hird, and Mr. Leininger. What instructions do you have for him?

MR. HIRD: My instructions to the witness are you can identify the individuals involved, but I will

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instruct the witness not to describe specific contributions made by any specific individual.

MR. SCHWARTZBAUER: Okay.

MR. SHAKMAN: To the extent I join with that objection I want to clarify what it's based upon. We are not claiming that the involvement of Mr. Hansel and Mr. Reiner is protected as a matter of any state process, but we view their contribution as one which they made within a confidence shared with the United States people on this project. And since Mr. Hird's advised that he intends to assert -- has asserted in the past certain privileges as to those conversations and confidence we do not intend to do anything contrary to violate that privilege. And to that extent we then join in the objection.

[pp. 63-65]

* * *

Q. Okay. All right. Did you rely on any documents in preparing the ROD?

A. Oh, those --

MR. HIRD: I object to the form of the question. I object to the question.

(At this time a discussion was held off the record.)

MR. HIRD: Mr. Bitter, I caution you to answer the question only in terms of what the assistant administrator relied on in reaching his decision.

A. Would you repeat the question, please?

Q. My question was did you rely on any documents in preparing the ROD.

MR HIRD: I will caution you to answer only to the extent you can identify those documents that were used by the assistant administrator in reaching the decision.

A. Those documents listed on page 1 of the Record of Decision, Exhibit 624.

Q. The first page, very top of the page?

A. Correct.

Q. Okay. And as I understand your counsel's instruction, you're not going to tell us about any others, is that right?

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MR. HIRD: He can only answer to the instruction.

[p. 68]

* * *

Q. Well, did you write this ROD or not?

MR. HIRD: I object to this question. Instruct the witness not to answer. The Record of Decision is signed by Lee Thomas, Assistant Administrator.

MR. SCHWARTZBAUER: Well, you've taken a position that we can't take Lee Thomas' deposition and you've provided Mr. Bitter as a substitute for Lee Thomas. Now you're telling us we can't question Mr. Bitter too.

MR. HIRD: You can question him about what the ROD means. You cannot question him for any individual participated in the preparation of the record about what a particular individual contributed to the final decision. You can ask questions about what the decision means. Otherwise you're invading the mental processes of the decision maker which the Courts have held is something that is not an appropriate subject for deposition.

MR. SCHWARTZBAUER: I disagree with your point of view, David, so I will proceed to ask the questions. And if you want to instruct him not to answer that's your prerogative. Those are your risks.

[p. 71-72]

* * *

Q. Well, I want to be specific. What groundwater modeling or other specific data was available to you or the EPA in concluding that pumping of wells 15 and 10 would, in fact, constitute a major component of a gradient control system. What specific data.

MR. HIRD: Answer to the extent if it involves information about what's in the EPA and you as part of the agency.

A. The data that I am aware of is produced by the MPCA, possibly by the USGS, with respect to the effects of pumping well SLP15.

Q. Well, Paul, this documents states that operation of the system at 1,200 gallons per minute will serve as a major component of the gradient control well system. That seems to involve a judgment on the

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part of the EPA that this will indeed be an effective part of a gradient control system. Now, whose opinion do you have that such pumpage will be an effective part of the gradient control well system?

MR. HIRD: I object to the question and instruct the witness not to answer.

(At this time a discussion was held off the record.)

HR. HIRD: I would instructed the witness that he may answer the question to the extent you can identify what information the agency had which would lead it to that conclusion.

Q. What specific information did the agency have that lead it to that conclusion?

MR. HIRD: I would instructed you not to answer. You can answer what information the agency consulted that would be relevant to that.

[pp. 78]

* * *

Q. As we sit here today can you tell us what the average pumping rate of wells 10 and 15 was historically before they were closed in 1978?

A. I would have to look the data up to answer that.

Q. Well, at the time that you made this statement in the ROD did you have that data in mind?

MR. HIRD: I object to the form of the question. If you want to asked at the time I object to the question and intruct the witness not to answer.

* * *

[p. 89]

Q. Well, when this ROD was prepared, who contributed the information concerning the criteria?

A. Is that question to me?

MR. HIRD: I believe it is. I instruct the witness not to answer.

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Q. Well, who assisted you with the portion of the ROD?

MR. HIRD: I'd instruct the witness not to answer. You can identify who assisted you, who was involved in the process generally but not with respect to any particular portion.

[p. 100]

* * *

Q. Well, were there any toxicologists involved in the preparation of this ROD?

(At this time a discussion was held off the record.)

A. I've answered that once before. It was Doctor Selkirk.

Q. Did he write that sentence?

MR. HIRD: I object to the question. Instruct the witness not to answer.

Q. Did he approve of that sentence?

MR. HIRD: I object to the question and instruct the witness not to answer.

Q. Did you refer this ROD, specifically this sentence that I'm asking you about, to anybody else at EPA for advice?

MR. HIRD: I object to the question and instruct the witness not to answer ...

* * *

Riner Deposition

[pp. 167-169]

Q. How many days did you spend talking to Mr. Bitter about that administrative order and record of decision?

A. I don't think I could estimate a total amount of time that I spent talking with him because it was on a piecemeal basis --

MR. SHAKMAN: I guess I'd object to that question as outside the scope of Phase I. The witness has already answered it.

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MS. COMSTOCK: Well, I obviously don't think it's outside the scope of Phase I.

Q. Did you spend more than a dozen days talking to Mr. Bitter about the ROD?

A. By a dozen days, do you mean 96 hours of my time?

Q. Right?

MR. SHAKMAN: I guess I'm going to object and instruct the witness not to answer. If you think you're entitled to that line of inquiry I guess you'll have to pursue that with the Special Master.

MS. COMSTOCK: We may then have to do that.

MR. SHAKMAN: Excuse us a minute.

(At this time a discussion was held off the record.)

Q. How many work days did you spend drafting the amendment to the cooperative agreement?

MR. SHAKMAN: Same objection; same instruction to the witness.

Q. ~~Mr. Riner~~, is it a correct understanding on my part that between the early part of 1984 - well, for most of 1984 that most of your time was spent drafting an agreement to the cooperative agreement, supervising the well 23 and well 105 work, consulting with Mr. Bitter on the ROD; is that what I understood you to testify?

MR. SHAKMAN: This is within the area of an objection, but in the spirit of cooperation and moving things along, and since I earlier allowed them to answer that interpreting that as part of the background, his work, I will note the objection but permit him to answer.

* * *

[pp. 177-182]

Q. Why didn't you issue Reilly a RFRA sooner?

MR. SHAKMAN: Objection. I think that intrudes in the State's deliberative process and I'll instruct the witness not to answer. I also think it's irrelevant to

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Phase I and will object on that grounds as well. I will note for - no, strike that.

Q. Mr. Riner, did you proposed that Reilly be issued a RFRA, or did that come from some other source?

A. I didn't propose it.

Q. Who did?

A. The topic had been discussed by Mr. Heffern and Mr. Wikre.

Q. When was it decided to issue Reilly a RFRA?

MR. SHAKMAN: I guess I'd -- give me a moment to see --

I won't have an objection to the date.

A. The decision was made, I believe, in September or October of 1984.

Q. And who made that decision?

A. Mr. Wikre.

Q. What was the basis for the decision?

MR. SHAKMAN: I'd object to that as deliberative process privilege and instruct that witness - by way of foundation before I instruct him not to answer, would you know the basis for that decision?

THE WITNESS: Yes.

MR. SHAKMAN: Witness indicated he does have knowledge in this and I instruct him not to answer. I'd also have the objection that it's not relevant to Phase I.

MS. COMSTOCK: The basis for the issuance of the RFRA is not relevant to Phase I; do I understand you correctly, Steve?

MR. SHAKMAN: I may have stated that too broad. Certainly the technical basis for why the RFRA was sought would be relevant. Some questions have been asked and you may ask more.

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The strategic deliberations among the agency decision makers in this particular administrative fashion at this particular time would be the area to which my objection would run, so let me narrow it to say that to the extent that the decision ran to the technical grounds for issuing the order, I would have no objection. He may answer.

I had initially interpreted the line of questioning as going to why this particular date rather than some other date did the decision makers conclude to recommend to the PCA Board that issuance, and I think that type of administrative decision to seek an action is what the deliberative process privilege runs to. It doesn't run to technical basis for it, and with that guidance, you may answer the question.

Q. Was there an independent technical basis to issue the RFRA?

A. Independent of what?

Q. Policy of litigation strategy.

A. Are you talking about the issuance of the RFRA or the content of the RFRA?

Q. The decision to issue the RFRA.

MR. SHAKMAN: That decision was made by the Pollution Control Agency Board in December --

MS. COMSTOCK: On recommendation of the staff.

MR. SHAKMAN: The recommendation of the staff, is that what the question is too?

MS. COMSTOCK: Yes.

A. Again, I don't think I can answer that without getting in to the area in which I've been cautioned not to answer.

Q. So is your answer that there was no separate and independent technical bases for issuance of the RFRA?

MR. SHAKMAN: I'd object to that as argumentative, and the question's been asked and --

MS. COMSTOCK: I'm asking for clarification from the witness.

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MR. SIERKS: I think the answer to that requires the disclosure of --

MR. SHAKMAN: If you can't answer the question without getting into that area I'm instructing you not to answer.

A. Again, I'm unclear about the meaning of the term "independent basis."

MR. SHAKMAN: By that I meant if there are elements of what's in the RFRA that Ms. Comstock wanted to ask you about and what supported them and why they were recommended, but since that would pertain to the remedy sought you can certainly answer that much of it.

A. As I explained at some length yesterday, the content of the RFRA was based on the State's view of the remedy as presented to the defendants in the case last January.

Q. Was there a technical reason to issue the RFRA at the time it was issued?

MR. SHAKMAN: I have the same objection there; was there a technical -- could I hear the question again?

(Whereupon the requested portion of the record was read by the Court Reporter.)

MR. SHAKMAN: I'd give the same instruction again as to the general environmental problem and the need to do something about it. That goes to remedy, and I think the witness may answer to that. As to the time this decision was made and why it was made then as to another day, I think that intrudes into the deliberative process and I'm instructing him not to answer as to that aspect of the question.

A. I don't feel I can answer the question without violating my counsel's instructions.

Q. Well, this may be a matter we need to take up with the Special Master. Just for clarification, in the event we do take this to the Special Master, I understand that you are essentially testifying that the timing of the RFRA was not based on technical considerations, is that correct?

MR. SHAKMAN: Just a moment. Off the record.

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(At this time a discussion was held off the record.)

MR. SHAKMAN: For the same reasons earlier stated I'll instruct the witness not to answer that last question.

MS. COMSTOCK: Deliberative process, is that what you're claiming, counsel?

MR. SHAKMAN: The reasons are on the record. Deliberative process is one of them, yes.

MS. COMSTOCK: What other bases are you --

MR. SHAKMAN: I stated it previously in the record and I think it's there. I believe it didn't relate to Phase I, deliberative process, and I may have had another. I'd have to look back at the transcript.

* * *

When an agency has instituted a lawsuit which forces a party to "conform" to the agency's view of the law, the challenged party should not be forced to accept carte blanche, the agency's position. Reilly believes that the agency, like any other party, must not to be allowed to assert its bald conclusions concerning remedial measures while denying to Reilly the right to probe the background and basis for those conclusions. Reilly is not attempting to discover the mental processes of agency members. We are simply questioning the employees of the governmental agencies who have been pre-designated by the plaintiffs as the witnesses who will testify regarding the requested remedy. To invoke a "deliberative process" theory to prevent that discovery, is to effectively deny Reilly its right to cross-examination.

Depositions are discovery tools and where the Court has allowed for deposition of experts, that process should not be muted by vague claims of privilege, such as those noted above. See generally, Herbst v. International Telephone & Telegraph Corp., 65 F.R.D. 528 (D. Conn. 1975). See also, Beverage Marketing Corp. v. Ogilvy & Mather Direct Response, Inc., 563 F. Supp. 1013 (S.D.N.Y. 1983); Quadrini v. Sikorsky Aircraft Division, United Aircraft Corp., 74 F.R.D. 594 (D. Conn. 1977).

For these reasons, Reilly respectfully requests the Court to grant Reilly's motion to compel discovery.

2. REILLY TAR & CHEMICAL CORPORATION'S MOTION TO COMPEL DISCOVERY OF ROD DRAFTS.

Pursuant to the case management order, the parties have exchanged lists identifying those documents withheld from

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production on grounds of privilege. Following Reilly's letter motion to Judge Winton, dated January 28, 1985, all parties agreed to update their respective privilege lists so as to include the basis for the claimed privilege.* The United States revised its privilege list on February 5, 1985. (A-2).

Reilly has reviewed the United States' response regarding draft versions of the Record of Decision (ROD) and moves the Court to compel production of these documents or alternatively to review the documents in camera to decide the question. Reilly believes the asserted attorney-client and deliberative process privileges have been improperly invoked. Reilly believes the relevance of this material to the litigation, and Reilly's inability to obtain the information independent of the plaintiffs, necessitates the requested discovery.

The Record of Decision or "ROD" refers in this case to a written document dated June 6, 1984 which later accompanied an administrative order directed to Reilly, ordering that Reilly build and operate a granular activated carbon (GAC) treatment plant in the City of St. Louis Park. (A-3). The primary purpose of a ROD is to document that the remedial actions recommended for a particular site are consistent with CERCLA and the NCP.** The Director of EPA's Office of Emergency Remedial Response, Mr. William Hedeman, has stated that the ROD must contain the following summary information:

- Consistency with NCP. The summary information must show that alternatives were developed, screened, and evaluated in accordance with §§ 300.68(g) through (i) of the NCP. When the feasibility study is adequate in this area, the ROD document should briefly summarize the process and reference the feasibility study for additional information.
- No-action alternative. Under § 300.68(g) of the NCP, the Agency evaluates a no-action

* Reilly's motion of January 28, 1985 sought production of documents improperly designated as privileged. That motion is still pending before the Court. Reilly will provide the Court with a supplemental memorandum in light of the plaintiffs' revised privilege designations. The motion before the court today deals primarily with the deliberative process privilege as it has been asserted by the United States and the State of Minnesota.

** The Comprehensive Environmental Response Compensation and Liability Act (CERCLA) is found at 42 U.S.C. 9601 et. seq. Promulgation of the National Contingency Plan (NCP) was required under § 105 of CERCLA. The NCP can be found at 40 CFR § 300 et. seq.

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alternative. The ROD summary must document that the no-action alternative was evaluated and describe the reasons for selection of an action (e.g., the release poses an actual or potential threat to public health or the environment), or the acceptance of no action as the final decision.

- Extent of remedy. The ROD summary must explain how the level of cleanup for the recommended remedy was determined. The remedial action may be based on applicable and/or relevant federal public health or environmental standards. When standards are used, the ROD summary must document how the standards will be applied and describe the engineering approach to cost-effectively implement the standards. When existing standards, criteria, or regulations are not relevant, the approach used to establish a level of cleanup must be developed in consultation with national EPA guidance. If the recommended alternative does not attain or exceed applicable or relevant standards, the ROD summary must describe how the circumstances for noncompliance are consistent with EPA policy.

- Cost estimates. Costs must be shown for all final alternatives evaluated in the feasibility study. A table showing the remedial action cost, annual operation and maintenance (O&M) cost, and total present worth should be included. It is important to evaluate the accuracy of cost estimates. Expected accuracies for feasibility study estimates should be within +50 and -30 percent of the actual cost estimates. Remedial investigation data should be sufficient for this purpose. If existing data cannot support an adequate cost estimate, submission of the ROD should be delayed until additional field data can be collected and the cost estimates revised.

- Cost-effectiveness evaluation. The factors used to screen and evaluate alternatives are described in §§ 300.68(h) and (i) of the NCP. The ROD summary must describe the factors used to screen and evaluate alternatives. The feasibility study must include a narrative

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description of the advantages and disadvantages of each factor for all alternatives. These should be summarized in the ROD summary.

- CERCLA § 101(24). If all or part of the recommended remedial action involves off-site transport, storage, destruction, or disposal of hazardous wastes, the requirements of § 101(24) must be met. The remedial action, or component involving off-site activities, must be more cost-effective than other remedial actions, create new capacity to manage hazardous substances in addition to those at the facility, or be necessary to protect public health, welfare, or the environment from a present or potential risk. This determination is included in the ROD and must be discussed in the ROD summary document.

- Responsiveness Summary. Draft RODs should summarize citizen and potentially responsible party concerns known at that time. The responsiveness summary, included as a part of the final ROD package, must include a summary of comments received before and during the public comment period as well as activities conducted by EPA or the state to elicit citizen input. Comments from all parties, including potentially responsible parties, must be included. The summary must respond to comments and discuss in detail; (1) any changes made due to comments received; (2) how the selected remedy differs from the community or potentially responsible parties' preferred alternative; and (3) any alternatives recommended that were not evaluated in the feasibility study.

- Operation and Maintenance. If the recommended remedial action requires future O&M, the ROD should describe the O&M activities being approved. The ROD summary should describe the estimated duration and cost of O&M activities. It should also describe the funding requested from EPA and the State's mechanism for funding and carrying out the O&M activities.

Hedeman, The Pursuit of Consistent Decision Making under CERCLA, 14 ELR 10444, 10448 (December, 1984) (emphasis added). (A-4).

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Mr. Hedeman's article points up the Agency's obligations in developing a ROD. He notes for example, that the ROD must show that alternative remedial schemes, including the no-action alternative, were developed, screened and evaluated; that where existing standards, criteria or regulations are not relevant, the approach used to establish a cleanup must be developed in consultation with national EPA guidance; and that "draft RODs" should summarize citizen and potentially responsible party concerns. The Hedeman article suggests that the ROD process forces the agency to document the underlying foundations for its recommended remedial actions at a particular site. In that regard, the ROD and ROD drafts identify whether the Agency undertook those statutorily required steps in reaching a remedial decision.

A. THE ATTORNEY-CLIENT PRIVILEGE DOES NOT APPLY

The United States has stated that drafts of the Record of Decision were prepared in consultation with counsel, were confidential, were not intended for public dissemination, and are therefore protected by the attorney-client privilege.

Reilly fails to see the merits of this argument. The mere existence of an attorney-client relationship does not give blanket immunity from disclosure. The privilege must be raised explicitly and claimed specifically in respect to a particular communication. United States v. Goldfarb, 328 F.2d 280, 281-82 (6th Cir.), cert. denied, 377 U.S. 976 (1964).

It is Reilly's position that the ROD drafts do not meet the elements supporting the claimed privilege. The protected documents do not refer to communications made in confidence to an attorney by a client for purposes of seeking or obtaining legal advice. See, United States v. United Shoe Machinery Corp., 89 F. Supp. 357, 358-59 (D. Mass. 1950). Furthermore, the burden is upon the party claiming the benefits of nondisclosure to demonstrate that the basic elements of the privilege are present. An improperly asserted claim of privilege is no claim of privilege at all. International Paper Co. v. Fibreboard Corp., 63 F.R.D. 88, 94 (D. Del. 1974). The United States has failed to support its privilege claim.

Indeed, the ROD process must be distanced from the cloak of protection afforded to confidential communications between attorney and client. The attorney-client privilege is an exception to the general principle of full disclosure. As noted by the United States Supreme Court, "[E]xceptions to the demand for every man's evidence are not lightly created nor expansively

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construed, for they are in derogation of the search for truth." United States v. Nixon, 418 U.S. 683, 710 (1974).

Reilly suggests that the Court look beyond the mere assertions of privilege by the government. The ROD drafts were not made under a cloak of confidentiality. In fact, as the Hedeman article suggests, the relationship between the agency and the regulated community is one of open disclosure and not secrecy which fosters distrust. Additionally, Reilly notes that the United States has failed to show "that the injury to the protected relationship if disclosure were made is greater than the benefit that would be gained toward a correct disposition of the lawsuit." 8 Wigmore, Evidence § 2285.

Reilly suggests to the Court that a correct disposition of the lawsuit requires an indepth examination of the basis for the government's recommended remedial measures. In short, the ROD represents the agency's "model representation" of reasons supporting its remedial program. The government should not be allowed to thrust forth this ex parte document while deflecting further inquiry by assertion of the attorney-client privilege. Reilly respectfully requests the Court to compel production of the ROD documents.

B. THE DELIBERATIVE PROCESS PRIVILEGE AND THE DOCTRINE OF UNITED STATES V. MORGAN DO NOT APPLY.

The deliberative process privilege, like the attorney client privilege, is narrowly construed. Northrop Corp. v. McDonnell Douglas Corp., 751 F.2d 395, 404 (D.C. Ct. App. 1984); Schlefer v. United States, 702 F.2d 233, 237 (Ct. App., D.C. 1983). The privilege is a component of the executive privilege and it is used to protect intra-governmental communications which reflect opinions, recommendations and deliberations.* The Northrop court suggests that assertion of the deliberative process privilege requires a formal claim of privilege by the head of the department with control over the information. That formal claim must include a description of the documents involved, a statement that the department head has reviewed the documents involved, and an assessment of the consequences of disclosure of the information. 751 F.2d at 405, n. 11 citing Garber v. United States, 73 F.R.D. 364 (D.D.C. 1976), aff'd on other grounds, 578 F.2d 414 (D.C. Cir. 1978). See also, Wright & Miller § 2019.

* The United States also cites the doctrine of United States v. Morgan. That "doctrine" flows from a series of four Supreme Court cases which embody many issues in administrative law. To the extent the doctrine includes the deliberative process privilege, Reilly directs the Court to the discussion herein.

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As a procedural matter, the United States has failed to describe the ROD drafts with any particularity, there is no indication that the drafts were reviewed for privilege by the head of the agency or by his deputy, and as discussed below, the government has not provided an "assessment of the consequences of disclosure of the information." These procedural improprieties alone should dissolve any claim of privilege. International Paper Co. v. Fibreboard Corp., supra, page 17.

The United States has failed to provide a reason which would justify a finding of privilege. In Amchem Products, Inc. v. GAF Corporation, 64 F.R.D. 550 (N.D. Ga. 1974), the EPA refused to produce drafts of regulations and policy statements prepared for purposes of implementing the Federal Insecticide, Fungicide and Rodenticide Act. The court said that, "The mere fact that the documents requested were prepared by staff personnel of the EPA for consideration by other staff cannot, without more, justify precluding ... discovery of those documents. 64 F.R.D. at 553. The court went on to note that discovery rules of federal civil procedure apply to the United States in litigation in the same fashion as to any other litigant. Id. The court remained unconvinced that the information sought was in any sense "sensitive" or that some policy of the EPA would be jeopardized by disclosure. Id.

A similar result was reached in Ash Grove Cement Co. v. FTC, 511 F.2d 815 (D.C. Cir. 1975). reh'g denied, 519 F.2d 934 (D.C. Cir. 1975). This was "an action ... for the discovery of certain documents," to show that the FTC had prejudged its case. The plaintiff sought investigatory files, staff directives, internal memoranda and chronological minutes. The court, in remanding for in camera inspection, said that "we think that 'policy determinations' at least, and perhaps other matters included, are subject to public scrutiny." 511 F.2d at 818.

The underlying thread in these opinions is that the deliberative process privilege should never be lightly invoked and whenever claimed must be justified by some important counter-vailing policy. 64 F.R.D. at 553. Indeed, the determination of whether to allow the privilege remains for the Court. Reilly submits that the noted procedural flaws along with the lack of any reasoned justification for withholding the ROD drafts proves fatal to the privilege claim.

C. EVEN IF THE DELIBERATIVE PROCESS PRIVILEGE APPLIES, IT IS A QUALIFIED PRIVILEGE.

The deliberative process privilege is only a qualified right. Mobil Oil Corp. v. Department of Energy, 520 F. Supp.

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414, 417 (N.D. N.Y. 1981). A court may order production of privileged material even though the government has rightfully asserted the privilege and has satisfied the procedural formalities. The privilege is discretionary, involving a "balancing of the necessity for invocation of the privilege, on the one hand, against the potential value to the private litigant of the requested production on the other." United States v. Beatrice Foods Co., 52 F.R.D. 14, 20 (D. Minn. 1971). In weighing the competing interests militating for and against disclosure of privileged information, courts have considered a number of factors. The court in In Re Franklin National Bank Securities Litigation, 478 F. Supp. 577 (E.D.N.Y. 1979) identified the following five factors which it deemed significant in balancing the competing interests:

(i) the relevance of the evidence sought to be protected; (ii) the availability of other evidence, see, e.g., Carl Zeiss Stiftung v. V.E.B. Carl Zeiss, Jena, 40 F.R.D. 318, 331 (D.D.C. 1966), aff'd, on opinion below, 128 U.S.App.D.C. 10, 384 F.2d 979, cert. denied, 389 U.S. 952, 88 S.Ct. 334, 19 L.Ed.2d 361 (1967); (iii) the "seriousness" of the litigation and the issues involved, see, e.g., Freeman v. Seligson, 132 U.S.App.D.C. 56, 60, 405 F.2d 1326, 1340 (D.C. Cir. 1968); (iv) the role of the government in the litigation, see, e.g., Carl Zeiss Stiftung, 40 F.R.D. at 329; Bank of Dearborn v. Saxon, 244 F. Supp. 394, 401-03 (E.D. Mich. 1965); and (v) the possibility of future timidity by government employees who will be forced to recognize that their secrets are violable.

478 F. Supp. 583.

In the present circumstances, the draft RODs are particularly relevant to the case. As noted in the Hedeman article, supra, the ROD is a road map which supports and documents the remedial decisions to be instituted by the Government. In the Reilly case, the Government, through the ROD, is recommending the expenditure of millions of dollars to implement certain remedial measures. Reilly has and continues to deny the need for the Government's remedial plan. Inasmuch as the Government continues to press for the implementation of the ROD's remedial program, Reilly should, at a minimum, be allowed to discover the foundations of the Government's position. This Court has recently noted that the government bears the burden of proving that its

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remedy is appropriate and cost-effective. In other words, Reilly Tar has a right to a de novo determination of the appropriateness and cost-effectiveness of the government's remedy. Reilly Tar & Chemical Corporation v. United States, Civil File No. 3-85-473 (Memorandum order, page 20, dated April 5, 1985) (A-5). The government's proof will necessarily include the ROD. Reilly's request to look behind the ROD, to determine whether the government acted in accordance with CERCLA and the NCP, is appropriate in light of the Court's comments regarding burdens of proof. In some respects, the ROD is analogous to an expert witness. It summarizes the Government's remedial conclusions. Unlike an expert however, Reilly is presently unable to question the basis for the ROD's conclusions, whether those conclusions were always held, whether certain requirements of the NCP were considered, etc.* For example, early versions of the ROD may have required that drinking water criteria in St. Louis Park be based on a risk level of 10^{-5} (1 chance in 100,000) instead of 10^{-6} (1 chance in 1,000,000). (Referring to the "worst case" or "upper limit" calculation of the risk of disease, i.e. cancer, from drinking 2 liters of water every day for a lifetime). Reilly is entitled not only to refute the need for a 10^{-6} risk level in St. Louis Park but also to establish that the Government failed in its efforts to show that a 10^{-6} risk level is "appropriate and cost-effective." Reilly need not rely on the plaintiffs' mere assertion that the present ROD is appropriate and cost-effective. Draft versions of the ROD may tend to support or refute the Government's claim that it acted in accordance with the requirements of CERCLA and the NCP. Reilly seeks the requested discovery to test the government's claims.

The other factors cited in Franklin National, supra, are also pertinent to this Court's balancing of interests. The ROD "evidence" is not otherwise available to Reilly. Indeed, courts have held that the potential need for a protected document provides a compelling reason for ordering disclosure. See e.g.,

* Expert testimony will undoubtedly be crucial to the resolution of the complex and technical factual disputes ... effective cross-examination will be essential. Discovery of reports of experts, including reports embodying preliminary conclusions, can guard against the possibility of a sanitized presentation at trial, purged of less favorable opinions expressed at an earlier date. Quadrini v. Sikorsky Aircraft Civ., United Aircraft Corp., 74 F.R.D. 594, 595 (D. Conn. 1977). Reilly also notes that the plaintiffs have raised the deliberative process privilege in connection with the deposition of certain in-house and expert witnesses, further limiting the scope of discovery in this area. See argument, supra, page 20.

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McClelland v. Andrus, 606 F.2d 1278 (Ct of App., D.C. 1979). Reilly has shown a need for this otherwise unavailable material. Furthermore, the litigation is a serious matter to Reilly, and ultimately the public, involving expenditure of economic and human resources of great magnitude. Finally, the Government's role in the litigation is such that the Court should take a hard look at the use of evidence as both a sword and a shield. This Court, like Reilly, must not be hostage to the government's self-serving ex parte Record of Decision which was prepared by a litigating party in a manner to reflect consistency with CERCLA and the NCP.

Reilly believes that the Government will not be able to support its claims of privilege when the facts are weighed. No prejudice or intimidation will inure to suggest that government "secrets" are violable. The draft ROD documents are specific to Reilly, no one else. The Government should not be able to shield unfavorable documents while thrusting force those which support its case. That is not Reilly's understanding of the discovery process.

For these reasons, Reilly respectfully requests the Court to grant its motion compelling discovery of the ROD draft documents.

3. THE COURT SHOULD AWARD REILLY A REASONABLE SUM FOR ATTORNEYS' FEES UNDER RULE 37(4) OF THE FEDERAL RULES OF CIVIL PROCEDURE

Finally, we request that the Court award to Reilly a reasonable sum for attorneys' fees incurred in bringing this motion. Rule 37(4) of Fed. R. Civ. Proc. provides that if a motion such as this is granted, the court shall award such fees "unless the court finds that the opposition to the motion was substantially justified or that other circumstances make an award of expenses unjust." In this case, the government's repeated objections to legitimate expert witness discovery has made it very difficult and very expensive to conclude such discovery. The frequent and unsubstantial invocation of "privilege" to preclude discovery on central issues in the case should not be sanctioned.

For all of the reasons noted herein, Reilly respectfully requests the Court to grant the motions in their entirety.

Very truly yours,

Edward J. Schwartzbauer

Edward J. Schwartzbauer

by WER

EJS/am

cc: Counsel of Record

1. In the deposition of Paul Bitter, objections were asserted to the following questions or series of questions. Reilly requests the Court to compel responses.

<u>Page</u>	<u>Lines</u>
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89	1-16
100	6-25
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127	1-4, 20-25
129	25
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2. In the deposition of Stephen Riner, objections were asserted to the following questions or series of questions. Reilly requests the Court to compel responses.

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181	1-25
182	1-25
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194	1-25
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REC'D FEB 11 1985

DTB:WS:twc
90-7-1-21

Washington, D.C. 20530

February 5, 1985

Michael J. Wahoske, Esq.
Dorsey and Whitney
2200 First Bank Place East
Minneapolis, Minnesota 55402

Re: United States v. Reilly Tar & Chemical Corp.
No. 4-80-469 (D. Minn.)

Dear Mike:

This letter addresses the discovery issues raised by Reilly which were not resolved in my January 28, 1985 letter to you. The numbered paragraphs correspond to the paragraphs in Part II of my January 28, 1985 letter.

1-4 Addressed in 1/28/85 letter.

5. Will Wood worked for National Biocentrics in 1976; his analytical work relating to the Reilly site is contained in the National Biocentrics study. There is also a Mr. W. W. Wood who wrote a U.S.G.S. publication concerning guidelines for collection and field analysis of ground-water samples, which was cited as a reference by Marc Hult. W. W. Wood and Will Wood are separate individuals.

6. A list of the basis for claims of privilege by the United States for the documents you requested is attached.

7. Copying arrangements are being made by EPA personnel in Washington and Chicago. The EPA people have been involved in settlement negotiations and have not had an opportunity to collect all the documents yet. However, we will get the documents copied as soon as possible.

8. Addressed in 1/28/85 letter.

I believe that this addresses all discovery issues raised between Reilly and the United States. Please call me if you have any questions concerning these responses.

Sincerely,

Assistant Attorney General
Land and Natural Resources Division

By:



William Sierks
Environmental Enforcement Section

Enclosure

cc: All Counsel of Record

Basis for Claims of Privilege of Documents
Listed by the United States

1. Drafts of the Record of Decision were prepared in consultation with members of the Office of General Counsel of EPA and other attorneys representing the Agency. These drafts, which are confidential and not intended for public dissemination, are thus protected by the attorney-client privilege. They are also protected by the doctrine of United States v. Morgan and by the deliberative process privilege.

5. This document is protected by the work product privilege. The United States has made available documents which describe what data has been collected and analyzed and how the data was described or analyzed. The United States is withholding those documents which refer to work that is contemplated at the time the document was prepared, but not yet undertaken. At that point in time, the document does not contain any data or information; rather, it contains the United States' plans for collecting evidence, which is protected by the work product doctrine. The United States has made available documents which identify or describe data that has actually been collected or analyzed.

8. See response to item 5.

12. See response to item 5.

17. This document is protected by the work product privilege. Mike Kosakowski of EPA's Office of Waste Programs Enforcement (OWPE) was responsible for coordinating the United States' technical activities in connection with the

enforcement action, as opposed to Superfund activities, which were the responsibilities of Paul Bitter. In early 1983, Mr. Bitter assumed responsibility for enforcement activities as well. This letter concerned the activities of GCA, an enforcement contractor.

19. See response to item 27.

20. See response to item 27.

21. See response to items 5 and 17. Work product doctrine.

22. This document was prepared in anticipation of this lawsuit for the use of the attorneys representing the United States.

24. This document represents the thoughts of Melanie Toepfler on data that was collected. Ms. Toepfler was not involved in the collection or analysis of the data; rather she was advising the lawyers in using the data in the litigation. The documents which describe the data have been produced to Reilly. The document is protected by the work product doctrine.

25. See response to item 24.

26. See response to item 24.

27. Preliminary report prepared by USGS on behalf of plaintiffs. It is protected by the work product doctrine.

28. See response to item 27.

29. See response to item 28.

33. See response to item 5. GCA is a contractor

hired to assist in enforcement activities in this case. Work product doctrine.

34. This document was prepared to assist the United States in proving that the chain of custody for certain samples, if necessary to do so at trial. Work product doctrine.

35. K.W. Brown was a consultant retained by the United States in anticipation of litigation who will not testify at trial. This document is protected under the work product doctrine and Fed. R. Civ. P. 26(b)(4)(B).

41. See response to item 35.

56. See response to item 27.

57. See response to item 27.

64. Dr. Kimble is an expert retained in anticipation of litigation. This protocol was never used. The document is protected by the work product doctrine.

72. This document is protected by the work product doctrine. It concerns the proposed taking of samples for use at trial.

73. This document is protected by the work product doctrine. Techlaw was retained by the United States not to sample or analyze samples, but to assist in assembling documentation to prove chain of custody for samples at trial.

78. This document is protected by the work product doctrine. The document concerns efforts to get a firm under contract to conduct a proposed sampling program for enforcement purposes.

Signed 6/6/84

Record of Decision

Remedial Action Alternative Selection

Site: Reilly Tar Site in St. Louis Park, Minnesota.

Documents Reviewed

I have reviewed the following documents describing the analysis of cost-effectiveness of remedial alternatives for the Reilly Tar site in St. Louis Park, Minnesota.

- "Evaluation of Ground Water Treatment and Water Supply Alternatives for St. Louis Park, Minnesota," CH₂M-Hill, June 1983.
- Summary of Remedial Alternative Selection.
- "Study of Ground Water Contamination in St. Louis Park, Mn.," E. A. Hickock and Associates, November 1981.
- "Transport of Coal Tar Derivatives in the Prairie du Chien-Jordan Aquifer," USGS, February 1981.
- "Recommended Plan for a Comprehensive Solution of the Polynuclear Aromatic Hydrocarbon Problem in the St. Louis Park Area," Environmental Research and Technology, Incorporated, April 1983, Performed for and at the expense of Reilly Tar and Chemical Corporation.

Description of Selected Remedy

- Construction of a granular activated carbon (GAC) water treatment system at St. Louis Park Well 15/10 as a major component of restoration of drinking water quality to St. Louis Park, Minnesota.
- Operation of the above system at 1200 gallons per minute will also serve as a major component of a gradient control well system. The operation of the gradient control well system will protect the drinking water supplies of neighboring cities from contamination, and allow St. Louis Park eventually to open other wells closed due to contamination.

Declarations

Consistent with the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA) and the National Contingency Plan (40 CFR Part 300), I have determined that installation of a granular activated carbon water treatment system at St. Louis Park well 15/10 is a cost-effective remedy and provides adequate protection of public health, welfare, and the environment. The Minnesota Pollution Control Agency has been consulted and agrees with the approved remedy. In addition, this action will require future operation and maintenance to ensure the continued effectiveness of the remedy. These activities will be considered as part of the approved action and eligible for Trust Fund monies for a period of up to one year.

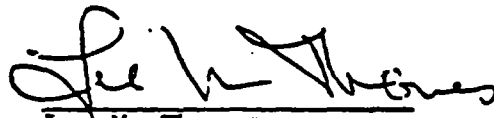
I have also determined that the action being taken is appropriate when balanced against the availability of Trust Fund monies for use at other sites, and is consistent with a permanent remedy at the site.

I am approving the installation of a granular activated carbon treatment system since a delay would create an unnecessary risk to the public health during peak usage of the City's water supply and allow the contamination to migrate further towards other municipal water supplies.

The State has largely completed a feasibility study for remedying the remaining problems at the site. The extent of ground water contamination has been determined for some additional aquifers affected by the Reilly Tar operation.

Following completion of the feasibility study, the State will conduct a public meeting on any additional remedies required to mitigate the contaminated ground water plume and source of contamination at the site. After submittal of their recommendation, I will make a further determination on the appropriate remedy for the remaining study areas.

6/6/84
Date


Lee M. Thomas
Assistant Administrator

RECORD OF DECISIONREILLY TAR, MINNESOTAEXECUTIVE SUMMARYPURPOSE

The purpose of this Record of Decision (ROD) is to select an appropriate remedial action at the Reilly Tar site, St. Louis Park, Minnesota that is consistent with the requirements of CERCLA and the NCP. The Assistant Administrator has been delegated the authority for that approval.

The primary source of drinking water for 3 cities, St. Louis Park, Edina, and Hopkins, which border Minneapolis has been contaminated by coal tar compounds produced by Reilly Tar. Since 1978, a total of 6 wells were closed and water conservation measures and contingency plans for purchase of alternate water supplies have been implemented by St. Louis Park. During fire emergencies, contaminated wells must be turned on. A total of 33% of the pre-1978 water supply capacity has been usurped by contamination. Public opinion is in favor of restoring adequately treated water to the distribution system as soon as possible. The State share of this project is 10%. Concurrence by all Federal and State authorities has been obtained. Unfortunately, the City of St. Louis Park will have to continue water conservation measures this summer since operation of the system will start 8 months after approval. The public would support construction beginning this summer.

BACKGROUND

The Reilly Tar and Chemical site occupied 80 acres in St. Louis Park, Minnesota. It was called Republic Creosote Works and operated between 1917 and 1972. The Company fractionalized coal tar into various oils and produced creosote. The creosote and waste products resulting from the Company's process polluted the surface of the site and 4 aquifers. The deep aquifers were polluted by direct migration of contaminants with the aquifers via a deep well located on-site. The contaminants were either injected into the well or overflowed into the well casing during runoff events and spills on the site. Consequently, many private wells and eventually municipal supplies became contaminated. Limited studies on portions of the site started in 1969. Ground water studies began in 1974 and drinking water treatability testing was initiated by a cooperative agreement between MPCA and EPA in 1981. The work performed under this cooperative agreement, funded at \$400,000, included: (1) a well survey to determine the amount of multi-aquifer wells that were conveying contamination between aquifers; (2) a cleanout of one on-site well known to contain coal tar contamination; and (3) a feasibility study for water treatment at St. Louis Park. A second cooperative agreement was awarded in December 1982 for \$1.9 million. This agreement was to accomplish the following: (1) an initial remedial measure to abandon multi-aquifer wells; (2) model gradient control well systems; (3) a remedial investigation to determine areal extent of contamination of the source material; and (4) a feasibility study for source

- 2 -

control measures. The initial remedial measure was delayed while Reilly completed and presented the findings of their own feasibility study. Now that negotiations with Reilly have terminated the activities funded by the second cooperative agreement will be completed during 1984.

The feasibility study funded by the first cooperative agreement recommended restoration of drinking water quality to the contaminated aquifer by installing granular activated carbon (GAC) treatment at an existing contaminated well. That action is the subject of this Record of Decision. This alternative provides a multi-purpose project and multiple benefits. It not only provides a cost-effective alternative when compared to other alternatives for restoring drinking water quality but, it also helps block the spread of contamination which would otherwise force the closure of more municipal wells.

The attached chart lists the alternatives, costs, advantages, and disadvantages to restore safe drinking water quality and quantity to the City of St. Louis Park. Alternative 2, 3, and 4 restore drinking water to St. Louis Park. Alternative 4; however, considers various levels of treatment of the contaminated aquifer to provide water quality to St. Louis Park. Alternatives 2, and 3 provide water from uncontaminated sources. Alternative 4, by providing water from the contaminated aquifer also assists in retracting the plume and allows the opening of 2 other closed wells. Therefore, any additional cost to retract the plume will be minimized. The capital cost of the GAC treatment system is \$633,000. Restoration of the existing well where the treatment system will be constructed is estimated to cost \$49,000. Design is estimated at \$68,000. Therefore the total project cost is estimated at \$750,000. The first year O&M cost is estimated at \$188,000.

The public, through the efforts of St. Louis Park and MPCA, have been well informed of the drinking water problems since 1978. Thus, at the public meeting where the MPCA presented the proposed GAC alternative, the primary concerns of the citizens was the urgency of restoring the drinking water on a timely basis. Another main concern regarded the payment of the system. The citizens were told that the proposal would be submitted to EPA for a funding decision and that costs would be recovered, by legal means, from the Reilly Tar and Chemical Corporation. The City keeps the public informed of the drinking water problem on a monthly basis through committee meetings specifically established for this problem.

The State and Region recommend implementation of GAC treatment to a level that represents 10^{-6} health risk or less. This alternative accomplishes the objective of restoring water quality and quantity to St. Louis Park. All other alternatives provide adequate water quality but do not block the spread of the contaminated plume and allows the opening of previously closed wells.

FURTHER NEEDS FOR SITE CLEANUP

There are 3 other aquifers contaminated with PAH wastes from Reilly Tar. These aquifers may need remedial action in order to protect future uses of the uncontaminated portions of the aquifers. This may require pump-out wells to limit the spread of contamination and protect down-gradient use of the aquifer. These aquifers currently have limited use in the areas of contamination and

pose no immediate endangerment to municipalities' drinking water. In addition, creosote waste has accumulated in surface areas and acts as a continuing source of ground water contamination. The State is completing feasibility studies for both source control measures and additional ground water control measures. An additional Record of Decision will be prepared to request approval of these additional measures. The attached schedule shows the sequence and duration of site activities.

ENFORCEMENT STATUS

EPA and U.S. DOJ is aggressively proceeding with litigation against the Reilly Tar and Chemical Company. Protracted discussions with Reilly Tar have not produced a concurrence by Reilly with the stated objectives of the EPA and MPCA.

NEXT STEPS

Milestones

Date

Sign Record of Decision
Amend CA for Design and Construction
Complete Design
Complete Construction

May 1984
June 1984
August 1984
June 1985

Alternative	Cost (\$1,000)		Public Health Considerations	Environmental Considerations	Technical Considerations	Public Comment	Other
	Capital	Present Worth					
1. No Action.	-	-	Unacceptable exposure to PAH if summer or fire demand requires use of contaminated well. Continued water shortages.	Continued migration of contaminated ground water; leading to contamination of Edina's water supply.	-	High resistance.	
2. Hookup to Minneapolis.	\$250	\$8,102	Reduces public health threat to less than 10^{-6} .	Continued migration of contaminated ground water; leading to contamination of Edina's water supply.	Relies on simple technology. No treatment is required.	Acceptable.	Has significantly higher O and present worth cost.
3. Drill Deeper Wells.	\$1,870	\$2,916	Reduces public health threat to less than 10^{-6} .	Continued migration of contaminated ground water leading to contamination of Edina's water supply. Depletes limited water resource in deeper aquifer.	Relies on proven construction technology.	Acceptable. to St. Louis Park, but not to Edina or Hopkins.	Has second highest present worth cost.
4. Aquifer Treatment.							
A. Ozone	\$374	\$1,618	At 2000 ng/l of PAH, removes taste and odor, but results in 10^{-5} to 10^{-6} risk.	Blocks migration and allows additional wells to be opened.	Not used on wide scale. Less responsive to slug loading than GAC. Would be expensive to retrofit if treatment goals change. Certainly that target risk levels will be consistently met is low due to operational inflexibility.	Acceptable.	Present worth is less than GAC at high risk level, but more at lower treatment goals change.
	\$459	\$2,109	At 1000 ng/l of PAH, results in 10^{-5} to 10^{-6} risk.				
	\$709	\$2,434	At 280 ng/l of PAH, results in 10^{-6} or less risk.				

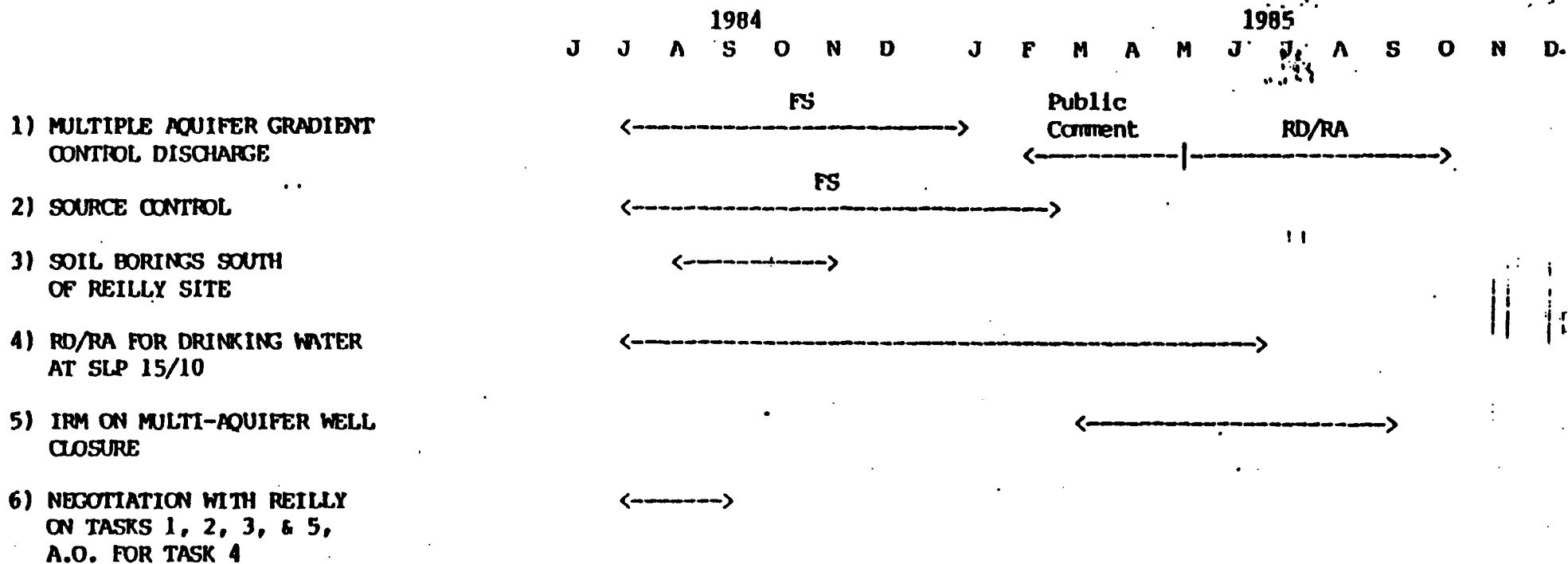
REILLY TA. MN (Continued)

Alternative	Cost (\$1,000)		Public Health Considerations	Environmental Considerations	Technical Considerations	Public Comment	Other
	Capital	Present Worth					
4. B. Granular Activated Carbon (GAC)	\$633	\$2,150	At 2000 ng/l of PAH, removes taste and odor but results in 10^{-5} to 10^{-6} risk.	Blocks migration and allows additional wells to be opened.	Considered best available technology. Dependable over a wide range of operating conditions. Responds well to slug loading. Likely to consistently meet risk target.	Acceptable.	Present worth is less than other technologies a recommended treatment level.
	\$633	\$2,263	At 1000 ng/l of PAH, results in 10^{-5} to 10^{-6} risk.				
	\$633	\$2,405*	At 280 ng/l of PAH, results in 10^{-6} or less risk.**				

* Recommended Alternative

** 280 ng/l is the operational performance target for the GAC treatment system at this site. The carcinogenic PAH will be reduced to a level less than or equal to 2.8 ng/l as a result of the operational performance target. This will assure that the health risk to the population is less than or equal to a 10^{-6} health risk.

REILLY TAR SCHEDULE OF REMEDIAL ACTIVITIES



Summary of Remedial Alternative Selection

Reilly Tar and Chemical Company

St. Louis Park, Minnesota

SITE LOCATION AND DESCRIPTION

The Reilly Tar and Chemical Company site occupied 80 acres of land located in St. Louis Park, Minnesota. A copy of a site map is attached (Figure 1). The plant site, called the Republic Creosote Works, was located west of Gorham, Republic and Louisiana Avenues, south of 32nd Street, east of Pennsylvania Avenue, and north of Walker Street. The company no longer owns the land; the City of St. Louis Park purchased the land from Reilly in 1972 and it is currently owned by the St. Louis Park Housing and Redevelopment Authority. The City is contiguous to the City of Minneapolis and exhibits a similar population density. Currently, the site is a park with a portion of it developed with condominiums. It is located in the midst of a residential area with some small industry.

SITE HISTORY

From 1918 to 1972 the company operated a coal tar distillation facility and wood preserving plant. Its primary production was creosote. The chemical compounds associated with this process are polynuclear aromatic hydrocarbons (PAH) and phenolics. Many of these compounds pose health risks and some are carcinogenic. The release to the environment of these compounds occurred during the coal distillation process and from materials stored on the site. The materials were apparently dumped into a well, referred to as W-23, which penetrated to the Mt. Simon/Hinckley Aquifer, a depth of about 900 feet. The well was cleaned out by the Minnesota Pollution Control Agency (MPCA) to a depth of 866 feet. Coal tar was removed down to a depth of 740 feet. Evidence of contamination of the Mt. Simon/Hinckley Aquifer has not been found at this time. Wastes containing coal tar and its distillation by-products were discharged, as a matter of disposal practice, overland into ditches that emptied into a peat bog south of the site. This practice, according to Reilly, occurred from 1917 to 1939. Figures 3a and 3b display, respectively, photos taken in 1947 - when the wood treating process was very active and in 1980 - after the City of St. Louis Park had landscaped the property and allowed some construction on the site. In 1940 and 1941 Reilly installed a wastewater treatment plant and discharged the effluent into the bog south of the site. The values of both phenolics and oil and grease in the discharge water varied typically from 100 to 1000 milligrams per liter. This discharge continued for the duration of Reilly's operation. The peat bog has retained contamination that was discharged over the years and, as is explained below, is now a major source of ground water contamination.

FIGURE 1

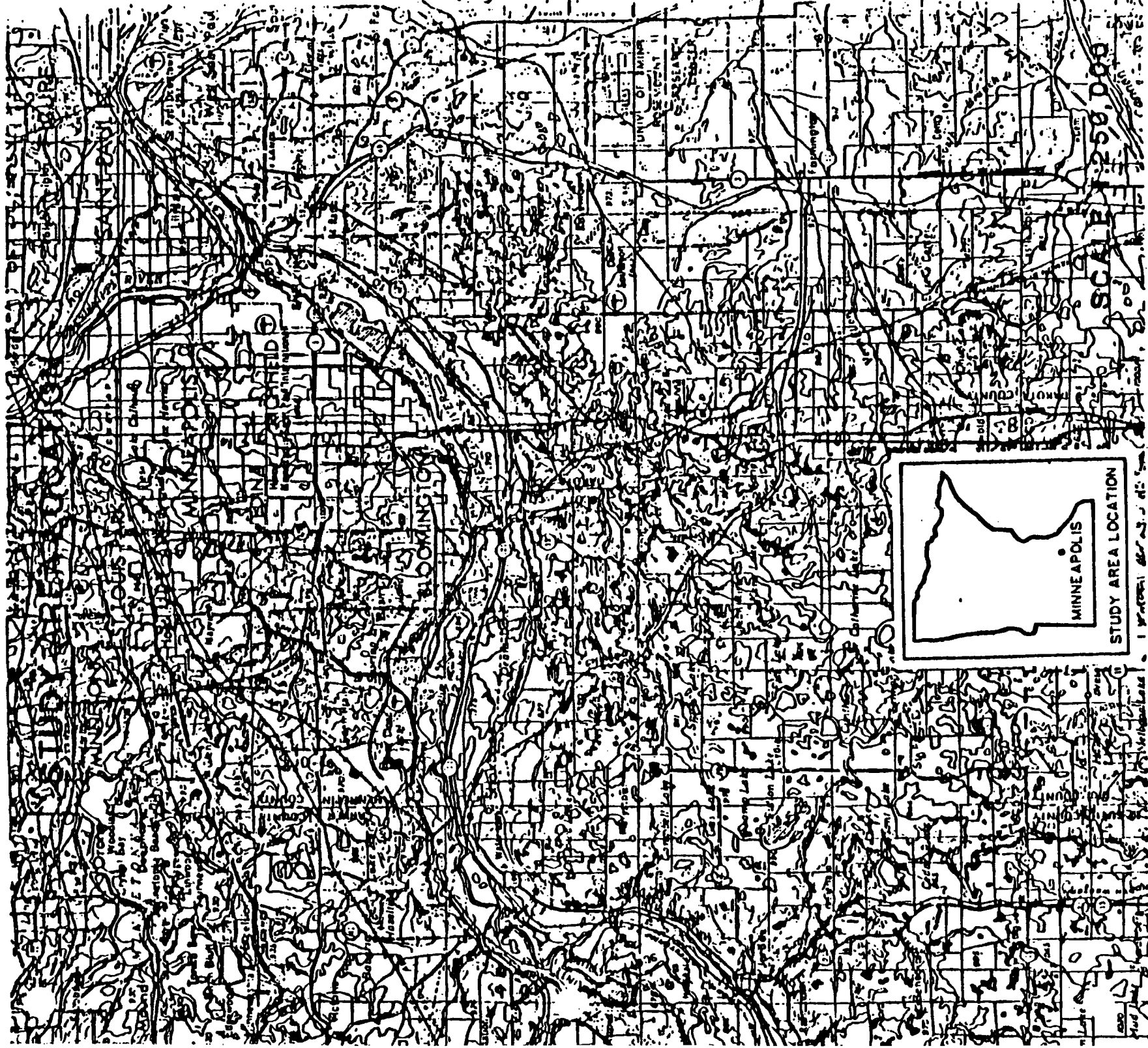
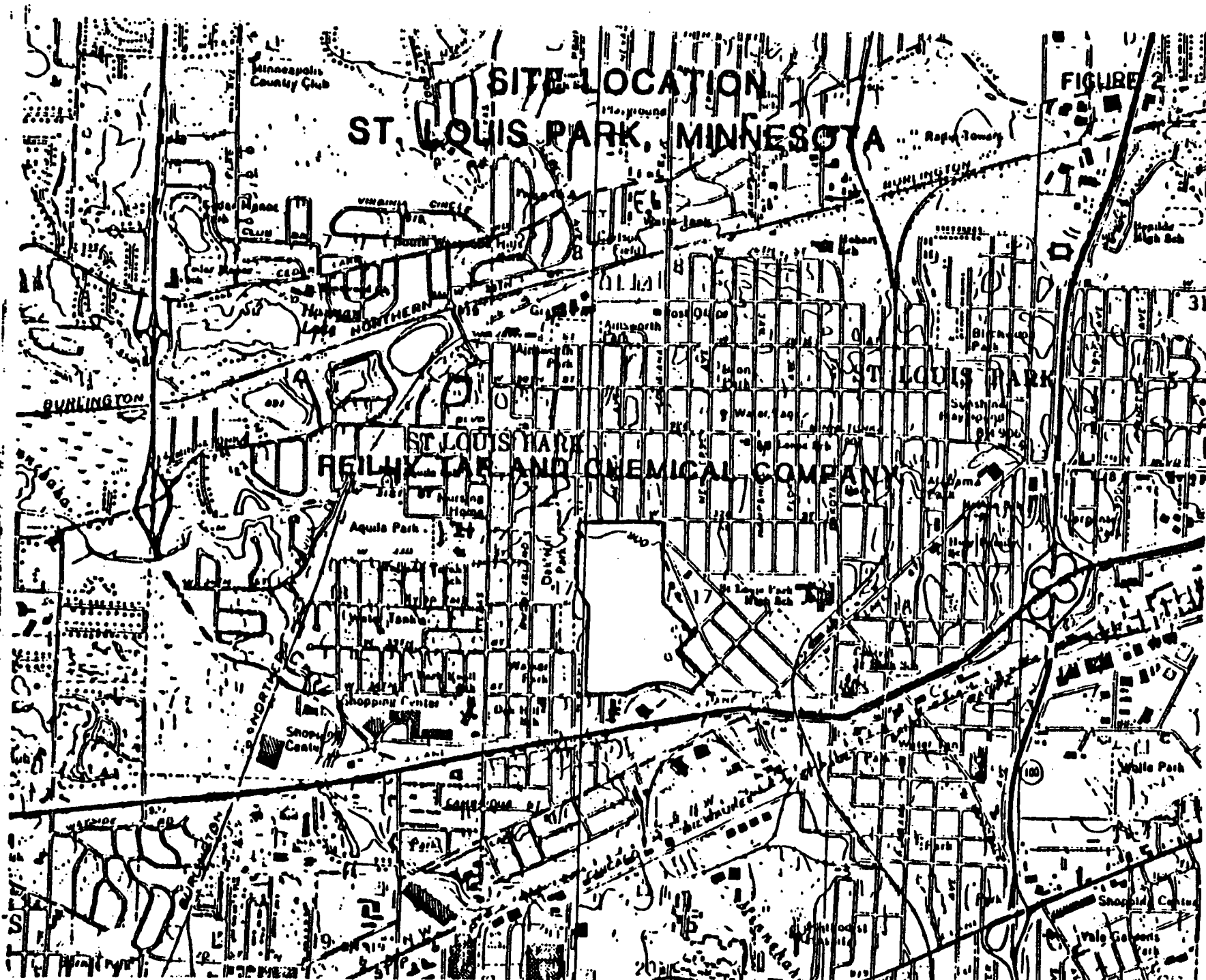


FIGURE 2



SHIRBOUNDA

DISINTEGRATE

APPROX 2000000 15500





In 1972 the plant was dismantled and the land sold to the City of St. Louis Park. In 1973 a storm water runoff collection system was built which fed into a lined pond on the site (Figure 3b). The pond on the site discharges into a drain which is routed to another pond off-site before it eventually discharges into Minnehaha Creek. The City of St. Louis Park (SLP) monitors the discharge into the creek. Construction of a block of condominiums on the northern part of the site began in 1976. At this time, no further construction is underway, although plans for new development of the site are pending by the Housing and Redevelopment Authority. All excavation of material has been inspected by the State and if found contaminated, the soils were disposed of.

The City of St. Louis Park drilled its first municipal well, W112, in 1932. The well, drilled to the Prairie du Chien-Jordan Aquifer, was closed within two weeks of its startup because of bad taste and odors. Several private wells near the plant site also exhibited contamination in water drawn from the Drift/Platteville Aquifer, during the 1930's and 1940's. Municipal wells continued to be constructed into the Prairie du Chien-Jordan Aquifer, further away from the Reilly site.

In the later 1970's the MDH used a more sensitive method of PAH analysis using High Performance Liquid Chromatography. This method allows detection limits to less than 10 parts per trillion (ppt) for each PAH component resolved on the chromatogram. As a result, St. Louis Park Well 10 (SLP 10) and SLP 15, which are contiguous, were closed in November 1978 due to elevated levels of PAH in the untreated water. SLP 7 and SLP 9 were also closed due to their proximity to the contaminated plume and due to the concern that, with SLP 10 and 15 shut down, the hydraulic gradient would be controlled by SLP 7 and 9 and thus, these wells would quickly become more contaminated. In December 1979, SLP 4 was also closed due to elevated PAH. SLP 5 was also closed due to elevated concentrations of PAH. In March 1981, a City of Hopkins Well, H3, was closed due to elevated concentrations of PAH. The amount of water supply lost to the City of St. Louis Park due to the closure of six wells is approximately 35% of the capacity existing prior to 1978, the year when wells were first closed. Consequently, the city instituted a water conservation program during the summer, increased pumping rates at uncontaminated wells and drilled a new well, SLP 17, to the deeper Mt. Simon-Hinckley aquifer. These measures do not provide a full water supply to the city. Even with SLP 17 on-line, the City still falls substantially short of peak water supply needs during the summer months. This is due, in part, to the limited yield of the Mt. Simon-Hinckley aquifer with the results that SLP 17 cannot be pumped at full capacity.

The City also has an agreement to purchase a limited amount of water from the neighboring City of Plymouth. However, Plymouth experiences water shortages and peak demands at the same time as the City of St. Louis Park. As a result, Plymouth cannot supply St. Louis Park on a consistent or dependable basis. This situation was highlighted last summer during a fire when the City turned on contaminated wells to provide enough water pressure in the distribution system. This situation is expected to recur in the future. The City has made plans to notify its citizens prior to returning contaminated wells to service for emergency situations.

Summary of Previous and Current Superfund Activities

There are three conceptual operable units involved with the Reilly Tar remedial response. These include: (1) restoration of drinking water supply to St. Louis Park, (2) containment or treatment of ground water in contaminated aquifers, and (3) source control of the bog and contaminated soil at the site.

In August 1981 the MPCA was awarded a cooperative agreement to investigate Well W23, and to perform a feasibility study for restoration of drinking water which serves as the basis for this Record of Decision. During that study the State removed coal tar deposits from Well W23 that were a source of ground water contamination. The well itself is now clean although some residual contamination probably remains in the aquifers penetrated by the well. In December 1982 a second \$1.9 million cooperative agreement was awarded to the MPCA to accomplish the following tasks:

- (1) An Immediate Remedial Measure to abandon multi-aquifer wells such as Well W105 located on site. This partially fulfills operable unit (2) above,
- (2) Model and test previously proposed gradient control well systems in Prairie du Chien/Jordan Aquifer. This partially fulfills operable unit (2) above,
- (3) Compile existing soil logs and analytical data to determine extent of contamination. This partially fulfills operable unit (3) above, and
- (4) A feasibility study for the source material to fulfill operable unit (3) above.

Tasks number (2) and (3) are substantially complete. Tasks number (1) and (4) which constitute approximately \$1.4 million of the cooperative agreement have been delayed while feasibility work accomplished by Reilly Tar through its consultants was conducted over the last year. Since the Reilly work was performed concurrently with implementation of the cooperative agreement, the MPCA and EPA withheld some major expenditures in anticipation of a useful work product produced by Reilly and possibly the implementation of certain cooperative agreement tasks by Reilly. To date, Reilly has not accepted the responsibility for implementation of the tasks under the current agreement which will be somewhat modified in an amendment forthcoming from the MPCA. The amendment will reflect the input provided by Reilly for solution of the total problems at the site. Due to the Reilly study, the MPCA will need only to perform a limited feasibility study for disposition of gradient control well discharge and some remedial investigation of soils off-site for the purpose of establishing deed restrictions and of Drift/Platteville and St. Peter Aquifers. There exists enough money in the current agreement to reprogram for design and construction of the highest priority task, the drinking water treatment system proposed in this Record of Decision. The remedy described herein pertains only to funding a water treatment system for St. Louis Park Well SLP 15/10. A second Record of Decision addressing the remaining site problems is anticipated for submittal following completion of the on-going feasibility activities.

- 4 -

ENFORCEMENT HISTORY

On September 4, 1980, the U.S. Department of Justice (USDOJ) filed a complaint against Reilly Tar under Section 7003 of RCRA. The State moved to intervene as a plaintiff.

On October 1980, an order was entered granting the State of Minnesota and the City of St. Louis Park leave to intervene as co-plaintiffs in Federal enforcement.

On February 25, 1981, a demand letter was sent from the U.S. Attorney to Reilly Tar.

On March 27, 1981, Reilly denied liability for any remedial action costs.

On August 17, 1981, another demand letter was sent to Reilly Tar requiring payment of \$200,000 for remedial measures to be taken at the site by the MPCA through a cooperative agreement with EPA.

On September 25, 1981, a CERCLA Count was added to the complaint.

On January 15, 1982, Judge Paul Magnuson heard arguments on the Motion to Dismiss filed by Reilly Tar.

On August 20, 1982, Reilly's Motion to Dismiss was denied.

On July 22, 1982, the USDOJ requested that Reilly submit a work plan for remedying the pollution problem at the Reilly Tar site within 30 days. Reilly did not submit a plan within that period.

At a meeting held on August 24, 1982, Reilly proposed to prepare a comprehensive plan to remedy the PAH problem. However, EPA and MPCA indicated that they would go ahead with the work planned under the cooperative agreement pending receipt of Reilly's plan.

Summary of Technical Discussions With Reilly

In May 1982, following a series of letters and meetings among the DOJ, EPA, MPCA, and Reilly Tar, Reilly proposed to perform its own comprehensive plan to solve the PAH problems in the St. Louis Park area. This was initiated in August 1982. The MPCA continued work on the feasibility study for water treatment under the cooperative agreement with EPA.

In May 1983, Reilly publicly presented its plan to clean up the contaminated site in St. Louis Park. During the summer, MPCA and EPA reviewed Reilly's plan. From August through December 1983, MPCA and EPA technical representatives met with Reilly Tar technical consultants to determine if the regulatory agencies and Reilly Tar had common solutions to the problems caused by Reilly's operation in St. Louis Park.

Discussions ended with Reilly in February 1984, when it did not concur with the remedial action proposed by the regulatory agencies for each of the aquifers.

Hydrogeology

In order to understand the problems at the Reilly Tar site it is necessary to understand the hydrogeology in the area. Coal tar released from the site has contaminated four aquifers located beneath the site (see Table 1 and the attached figures of the basin geology). The aquifers that are being studied under the current cooperative agreement with the EPA and MPCA are the following:

TABLE 1

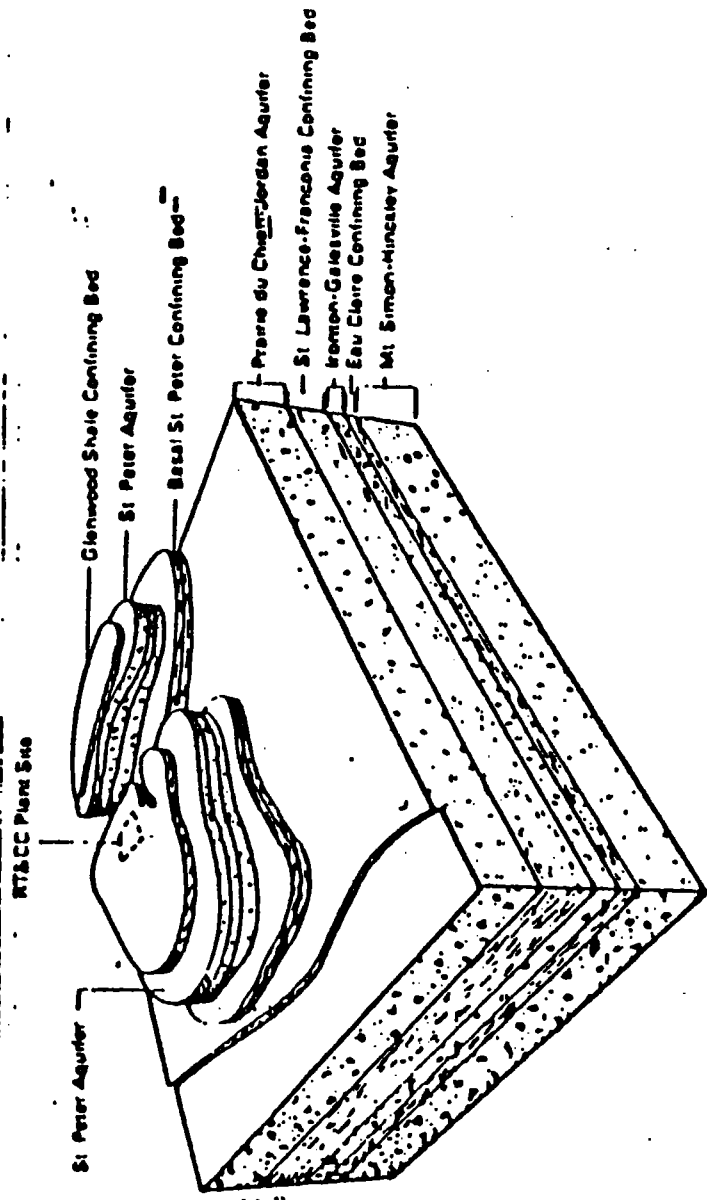
Hydrogeology Below Reilly Tar

<u>Aquifer</u>	<u>Approximate Depth (ft.)</u>	<u>Use</u>	<u>Upper Range of Contamination (Total PAHs)</u>
(1) Drift/ Platteville	0 - 90	Private/Industrial wells	1000 ug/l off- site
(2) St. Peter	90 - 200	Municipal/Private drinking water wells	< 10 ug/l off- site
(3) Prairie du Chien- Jordan	250 - 500	Municipal drinking water wells	10 ug/l off- site
(4) Iron-ton-Galesville	700 - 750	Industrial usage	< 10 ug/l is estimated to be on-site
(5) Mt. Simon-Hinckley	800 - 1100	Municipal drinking water wells	Not detected

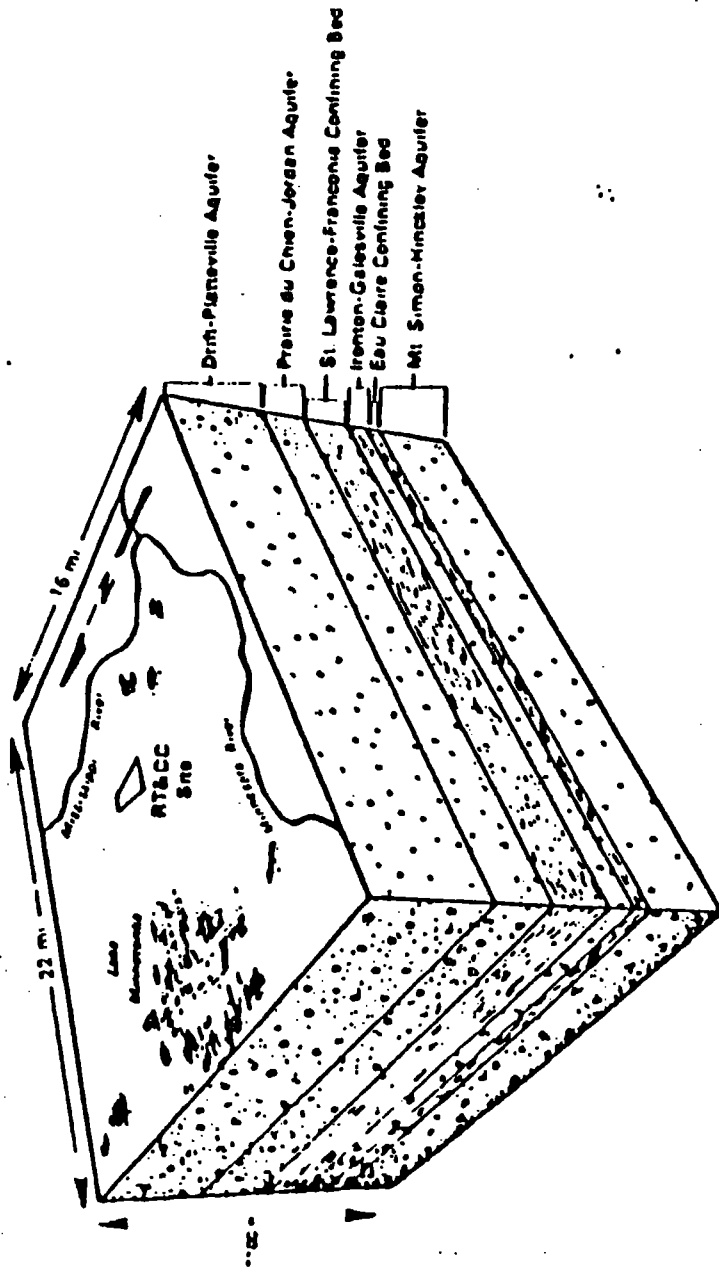
Ground water contamination in each aquifer under the site is approximately ten times higher than the off-site concentration shown above.

Current Site Status

The Prairie du Chien-Jordan Aquifer is the primary source of drinking water for 110,000 people in St. Louis Park, Edina, Hopkins and all communities adjacent to Minneapolis. The City of Minneapolis depends exclusively on the Mississippi River as its drinking water source and has considered utilizing the Prairie du Chien-Jordan as its secondary source of water supply in the future. The deeper Mt. Simon-Hinckley Aquifer is the second most extensively used drinking water aquifer for the area and it is utilized



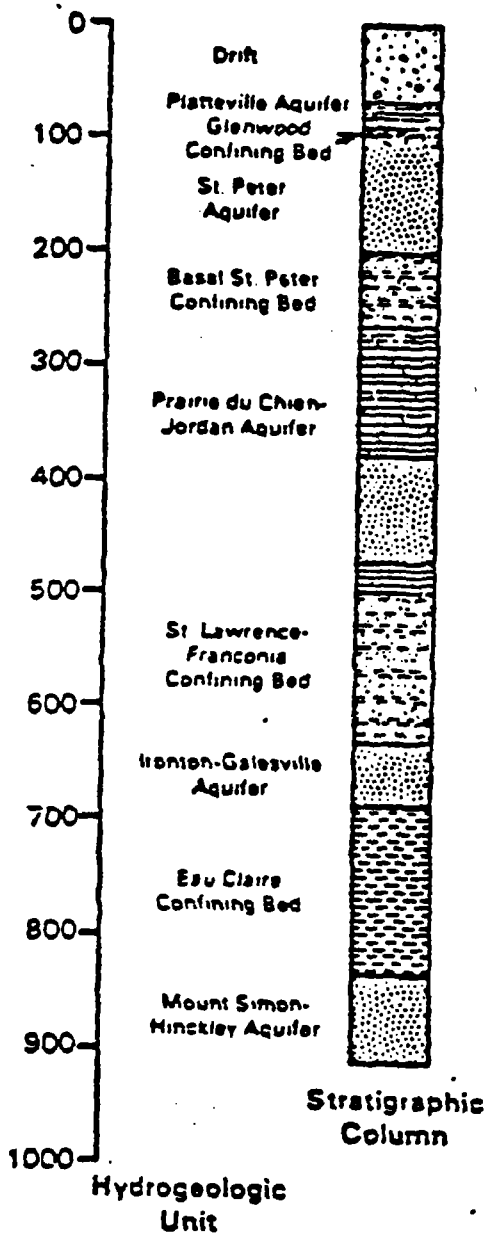
Geology Beneath Drm-Platteville Aquifer



Surface Features and Drm-Platteville Aquifer

Schematic View of Twin Cities Basin Geology

Depth Below
Land Surface,
in Feet



SUBSURFACE GEOLOGY UNDER
REILLY TAR SITE, ST. LOUIS PARK

to such an extent that the Minnesota Department of Natural Resources is concerned about further significant appropriation of water from this aquifer. The St. Peter Aquifer, while it once was a major source of water supply, is now a minor source of municipal drinking water supply because of the better water quality of the Prairie du Chien.

The uppermost aquifers, the Drift and Platteville, have in the past provided potable water to numerous private wells, but with municipal supplies becoming available, they are no longer used for potable purposes to any significant extent. However, there are still many private wells in the shallow aquifers which can be used for irrigation of lawns and gardens.

The extent of contamination in each aquifer varies greatly. No contamination has as yet been found in the Mt. Simon-Hinckley. The hydrogeology of the site suggests that the St. Peter aquifer is contaminated. Further sampling of wells near the site is expected to confirm this assumption. The area of contamination in the Prairie du Chien-Jordan extends east beyond Highway 169/100 and has the greatest potential public health impact due to the number of municipal water supply wells located just outside the presently known contaminated zone. The spread of contamination usurps the aquifer's potential as the primary source of drinking water.

Contamination of the Prairie du Chien-Jordan aquifer occurred by two modes. One is through direct contact of the aquifer with the coal tar material found in W-23. The material in this well has, for the most part, been removed. Another mode of contamination is through the inadequately constructed multiaquifer wells that allow contaminated water from the upper aquifers to be transported along the outer diameter of the casing into the deeper cleaner aquifers. These two mechanisms are the primary pathways of contamination of the Prairie du Chien-Jordan aquifer which resulted in the closure of 6 St. Louis Park wells and 1 City of Hopkins Well.

Releases of PAH and related coal-tar distillate material to the environment are still occurring. The primary methods of contamination of the uppermost aquifer (Drift/Platteville Aquifer) is through the contaminated soil at the site and the bog south of the site which act as sources for migration into the ground water. Contamination of the uppermost aquifer has been found to a depth of 90 feet in the bog area. It seems that the contamination is not evenly distributed throughout the bog, rather, the area and depth of soil contamination appears to be representative of a channel into the bog area. This is probably a consequence of the ditches used by Reilly to dispose of wastes. As the contamination dissolves into the aquifer it moves east, southeasterly where it migrates through a bedrock valley into the Platteville aquifer and toward the St. Peter Aquifer.

Drinking Water Criteria for PAH

The Minnesota Department of Health (MDH), since 1978, has been monitoring the water quality of the Prairie du Chien/Jordan aquifer for low concentrations of coal tar compounds, particularly PAH. Using the EPA published "Ambient Water Quality Criteria for Polynuclear Aromatic Hydrocarbons",

October 1980, the MDH developed a limitation of 28 ng/l for the sum of carcinogenic PAH. This represents a 10^{-5} health risk which, in theory, implies that one out of 100,000 people who drink two liters of water contaminated at this level for 70 years will contract cancer from this source. The MDH recommended a limitation of 280 ng/l for "other" PAH in drinking water. This was not based on a model; rather, the Department had concerns over the relationship of "other" PAH to the activation of carcinogenic PAH, the inability of the analytical method used at the time to distinguish between certain carcinogenic and "other" PAH compounds and also over the possibility that "other" PAH may still be toxic, tumor promoters and/or mutagens. In the context of this Record of Decision, carcinogenic compounds and carcinogenic PAH compounds are defined as those compounds that, when appropriately tested, produce cancer in at least one animal species. "Other" PAH compounds or "other" compounds are those compounds that were not tested for carcinogenesis and those compounds that, when appropriately tested, did not produce cancer in at least one animal species.

EPA recommends a target health risk of 10^{-6} . Using the same EPA Water Quality Criteria document as the MDH, this value would correspond to 2.8 ng/l of Benzo(a) Pyrene (BaP), the most potent carcinogen of the PAH family found in the environment. Therefore, EPA would prefer a technology capable of achieving a limit corresponding to a 10^{-6} health risk, if it is technologically feasible.

Heterocyclic compounds less potent than BaP, have been measured in the ground water and will, to some extent, be found in the finished water. Quinoline, for example, is less potent than BaP and has a 10^{-6} health risk concentration at 1,100 ng/l. Reducing Quinoline and other like carcinogens all to the level of reduction for BaP results in conservative protection of the drinking water population's public health. To do this the ratio of the sum of all the known carcinogenic compounds to the sum of all PAH and heterocyclic compounds found in the water supply was determined. These values vary but to be consistently conservative, the sum of all known carcinogens is, at the most, 70 ng/l based on the historical data at SLP 15. Based on the same data the total PAH and heterocyclic compounds found in the water supply is, on the average, about 7000 ng/l. Based on the variation of the data a ratio of carcinogenic compounds to total PAH and heterocyclic compounds is between 0.007 to 0.01.

Using the more conservative ratio of 0.01, the concentration of carcinogens found in the drinking water can be calculated. The application of this ratio is also conservative because its use assumes that the effluent characteristics of the PAH compounds from various treatment systems are the same as the attenuation of these compounds by the aquifer they travel through. Another conservative assumption used in the rationale and applied to the table below, is that the carcinogenic compounds measured in the drinking water are as potent as BaP. The use of this assumption accommodates the uncertainty in determining the health risks due to the interaction of carcinogens and known tumor promoters found in the water supply.

Sum of all PAH and Heterocyclic Compounds	Ratio of Health Risk Compounds to Total Compounds in the Drinking Water Supply	Resulting Concentration of Health Risk Compounds in Treated Water	Risk Based on BAP
2000 ng/l	0.01	20 ng/l	<10 ⁻⁵
1000 ng/l	0.01	10 ng/l	<10 ⁻⁵
280 ng/l	0.01	2.8 ng/l	<10 ⁻⁶
70 ng/l	0.01	0.7 ng/l	<10 ⁻⁶
<10 ng/l	0.01	0.1 ng/l	<10 ⁻⁷

It has been suggested that the drinking water criteria for the City of St. Louis Park be determined by examining background levels of PAH found in other drinking water supplies locally and nationally. These levels could then be compared to levels obtained through various treatment technologies.

While national data provide an important and useful tool, such data are not necessarily determinative. The National Contingency Plan (NCP) requires the EPA to make site specific determinations of the appropriate remedial action. In the case of St. Louis Park, national data have been carefully evaluated. EPA rejects the concept that drinking water for St. Louis Park need only be treated to the same PAH levels as the drinking water supply of the highest level in the country. To use the municipal supplies with the highest PAH concentrations in the country as a bench mark would ignore important local factors, such as the fact that prior to closure of the wells in 1978 the residents of St. Louis Park were consistently exposed over an undeterminable amount of time to abnormally high levels of PAH in their drinking water. Furthermore, it must be recognized that simply because certain drinking water systems draw on surface supplies, which typically have higher levels of PAH than ground water, does not imply that those levels are appropriate.

In the case of St. Louis Park, EPA recommends a conservative approach to protection of public health from carcinogenic PAH found in the drinking water aquifer. The ramification of recommending a health risk of 10⁻⁶ for carcinogenic PAH exerts a limitation for "other" PAH that would not exceed 90% of the drinking water systems thus far measured nationwide for PAH. The range of values, depending on regression of existing data, would fall between 150 to 300 ng/l for "other" PAH. The 10% of municipalities that have been identified as having higher concentrations for "other" PAH all draw their supplies from surface waters, not ground water.

The comparison of the background levels of "other" PAH (less than 120 ng/l) found in neighboring cities and again to the criterion developed by the MDH (280 ng/l) for "other" PAH, shows that these values are essentially equivalent. MDH is confident, and EPA agrees, that a level of approximately 280 ng/l for "other" PAH, and 2.8 ng/l for carcinogenic PAH will assure less than or equal to a 10⁻⁶ health risk to the population.

ALTERNATIVES EVALUATION

In August 1982, MPCA contracted with CH₂M Hill to complete the evaluation of water supply alternatives for St. Louis Park started under earlier studies.

The scope of this study was designed to fill in data gaps from previous studies and to provide sufficient information for the MPCA to select a water supply alternative for St. Louis Park. The Scope of Work was modified as the study progressed to compensate for new information and to effectively mesh this study with other ongoing studies by MPCA. The objectives of this study included:

- o Collect and analyze water samples from nearby communities to compare water quality goals for St. Louis Park with other water supplies in the area.
- o Develop water quality and quantity goals for restoring potable water supply capacity to the city of St. Louis Park.
- o Develop and evaluate water supply alternatives which will restore water supply capacity to the City of St. Louis Park. Prepare capital and O&M costs estimates for each alternative and discuss the relative advantages and disadvantages of each alternative considered, including no action.
- o Perform a cost-effectiveness analysis of the water supply alternatives. Prepare a recommendation for implementation based on cost and technical considerations.
- o Prepare a conceptual design and capital and O&M cost estimates for the full-scale system.

Summary and Conclusions

The following objectives were established to provide a common basis for developing and evaluating water supply alternatives for St. Louis Park:

- o Total supply shortfall of 3,400 gpm.
 - 1,200 gpm year-round usage for SLP 15/10.
 - 2,200 gpm "peaking" usage, three weeks per year, possibly utilizing the wells currently closed (SLP 7,9).
 - restore pre-1978 capacity.
- o Water quality equivalent to pre-1978 water quality in St. Louis Park.

The alternatives that satisfied these objectives were:

- o Treatment of SLP-15/10 to provide potable water and start-up SLP-7 and -9.
- o Install interconnection with City of Minneapolis water distribution system.
- o Install new wells in the deeper uncontaminated Mt. Simon/Hinckley Aquifer.

The no action alternative was also evaluated.

An assessment of technologies was conducted to screen potentially applicable technologies for removal of PAH and other coal tar derivatives from ground water. The following technologies were selected as most appropriate for further evaluation and bench-scale test work:

- o Oxidation Processes
 - Ozone (O_3).
 - Ozone/Ultraviolet (O_3/UV).
 - Hydrogen Peroxide/Ultraviolet (H_2O_2/UV).
 - Chlorine Dioxide (ClO_2).
- o Adsorption Processes
 - Granular Activated Carbon.
 - Powdered Activated Carbon.
 - Macroreticular Resin.
- o Membrane Processes
 - Reverse Osmosis.
 - Ultrafiltration.

SLP 15/10 was started up and well water was passed through the existing iron removal treatment system in September 1982. Water samples were obtained at various points in the treatment system and analyzed for PAH. Eighty percent removal of PAH was measured across the system, but effluent did not meet MDH's treatment goal of 280 ng/l total "other" PAH. Bench-scale tests indicated that the unit operations employed at the existing treatment system were ineffective in removing most PAH compounds. To resolve the discrepancies between the first onsite test and the bench-scale results, a second onsite test was conducted in December 1982. The results of the second onsite test corresponded well with bench scale results. It was concluded that the unit operations employed at the existing treatment system are not adequate to provide PAH removals for a potable water treatment system at SLP 15/10 nor were they reliable.

Only three technologies tested during the bench-scale testing program met the MDH treatment goals:

- o Granular Activated Carbon (GAC).
- o Ozone/Ultraviolet (O₃/UV).
- o Hydrogen Peroxide/Ultraviolet (H₂O₂/UV).

Conceptual designs were prepared for full-scale treatment systems using each of the above technologies. Comparative capital and annual O&M costs were estimated for each system, and the features of each system were examined. Based on both cost and technological considerations, GAC was selected for pilot-scale testing. A 42-day pilot-scale test of GAC was conducted at SLP 15/10. Based on the results of the pilot test, design criteria were developed for a full-scale GAC treatment system at SLP-15/10. The pilot-scale test was adequate to provide system design criteria, but could not be run long enough to accurately define carbon adsorption capacity in a full-scale system. Based on information gained in bench and pilot-scale testing, a range for expected carbon adsorption capacity was developed.

Powdered activated carbon (PAC) did not meet the criteria for bench scale testing and thus was not evaluated in detail. It had substantially the same construction cost (\$600,000) for mixing tank, clarifier and piping as the GAC but the O&M cost to meet the drinking water levels was impractical to consider due to the high and inefficient use of carbon. Since the amount of PAC required is higher than GAC, use of PAC will result in higher O&M costs and increase the risk that contaminants would pass through before adjustments were made. Furthermore, substantial amounts of carbon residue would be generated and removed on a frequent basis thereby increasing the maintenance cost of the system when compared to GAC. Hydrogen peroxide/ultraviolet treatment was evaluated and eliminated due to high capital and O&M costs. Capital cost was \$1.158 million and annual O&M cost is estimated at \$281,000 to reach the recommended treatment level. The present worth of this technology was \$3.806 million, significantly higher than GAC or ozone.

After completion of the treatment technology review and testing program, the following alternatives were identified for detailed evaluation:

- o Alternative No. 1 - Treat SLP 15/10 with Granular Activated Carbon for Potable Supply and Start Up SLP-7 and -9.
- o Alternative No. 2 - Install Interconnection with City of Minneapolis Water Distribution System.
- o Alternative No. 3 - Install Wells in Mt. Simon/Hinckley Aquifer.

The no action alternative was eliminated because of the documented contamination above the State and EPA's recommended targets at the drinking water wells, the consequent water supply shortfall, and the knowledge that the plume is continuously spreading toward other water supplies. Return of SLP 15/10 to operation would help retract the plume and when combined with proposed future remedial measures it would protect other cities.

Discussion of Alternatives

Costs for both treatment and non-treatment alternatives were developed and are shown in Table 2. The costs for treatment alternatives were developed over a range of treatment levels that correspond to various health risks. The treatment levels vary from sub organoleptic (i.e., beneath taste and odor) concentrations of 3000 to 4000 ng/l of other PAHs down to less than 10 ng/l. The associated risks are shown on Table 2. These cost estimates indicate that at the higher treatment range ozone is less expensive than granular activated carbon. As the treatment levels decrease to the target levels recommended by the State and EPA granular activated carbon becomes the less expensive alternative.

It can be seen that costs for deeper wells and for treatment of the Prairie du Chien/Jordan are similar, with treatment to the recommended PAH level slightly cheaper. This is due to the high expense of drilling to the Mt. Simon-Hinckley Aquifer which the City completed in the summer of 1983. The cost for one well was approximately \$600,000 due to the geologic factors that makes drilling and casing expensive. Furthermore, it is probable that iron removal facilities will be necessary for water taken from the Mt. Simon-Hinckley Aquifer. The cost of these facilities (estimated at \$400,000 per well) is not included in Table 2.

Installation of potable water supply wells in the Prairie du Chien/Jordan aquifer upgradient of the contamination was considered, however, costs would be similar to installing wells in the Mt. Simon-Hinckley, and in addition, installing new wells upgradient of the plume would tend to retract the plume and pollute other SLP water supply wells.

Based on the above cost evaluation, treatment of the Prairie du Chien/Jordan aquifer is the least costly alternative that meets the remedial action objectives. Either treatment with ozone or granular activated carbon will satisfy the objectives. However, granular activated carbon treatment is recommended for the following reasons:

- (1) It can be operated over a wide range to remove carcinogenic and other compounds to below detection limits, 1-2 ng/l (corresponding to less than 10^{-6} health risk), or up to higher levels such as the sub taste/odor threshold, of 3000-4000 ng/l of other PAH. At the limits of 2.8 ng/l for carcinogenic PAH, pilot plant data shows that no other PAH will be detected in the treated water.
- (2) It can accept slug loads without upset and with no need to adjust operation of the system. System regeneration is predictable.
- (3) It can be maintained with less operator oversight than other competitive technologies.
- (4) There is no generation of by-products which could become health risks.
- (5) GAC is a proven technology, preferred by the EPA-Office of Drinking Water, and represents the best available technology for this problem.

COSTS OF ALTERNATIVES (x 1000)

NOTES:

1. Present worth cost determined at 10%, 30 years.
2. 2000 ng/l = Sub Organoleptic Threshold.
3. GAC and O₃ costs are approximately constant for limits < 280 ng/l.
4. O₃ costs include \$60,000 for pilot work.
5. Health risk of carcinogenic compounds based on break through of non-carcinogenic compounds associated with non-carcinogenic limit (Based on BaP at 2.8 ng/l = 10⁻⁶).

Ozone technology, in addition to being slightly more expensive at the recommended treatment level, is less desirable for use in a drinking water system for several reasons:

- (1) Ozone generation and dosage is proportional to influent concentrations which will vary with operation of the system; therefore, the use of conservative (high) dosages tend to result in increased costs of operation.
- (2) If a slug load passes through the system it would not be totally treated, and by-products with possible health risks could be generated according to a review of relevant literature.
- (3) If influent concentrations exceed design criteria, the contaminants would pass through the system and adjustment of the system could not be made until analytical results are received. This would probably take 1 to 2 weeks, during which time contaminants would enter the drinking water system, possibly exposing the population to health-risk related compounds.
- (4) Two different ozone treatment systems were compared, for the various degrees of treatment. For limitations between 4000 ng/l and 1000 ng/l only ozone is necessary. For less than 1000 ng/l ozone with UV lamps is necessary. Ozone is cost-competitive to approximately 1000 ng/l. Below that, GAC is cost-effective. If ozone were implemented as a treatment technology, for levels above 1000 ng/l, and subsequently the regulatory agencies determined lower limitations were necessary, the installed ozone treatment system could not be retrofitted to meet the more stringent limits.

For economic reasons, ozone would be suitable and preferred for a discharge to surface water.

RECOMMENDED ALTERNATIVE

Section 300.68(j) of the National Oil and Hazardous Substances Contingency Plan states that EPA shall select the cost-effective alternative (i.e. the lowest cost alternative that is technologically feasible and reliable and which effectively mitigates and minimizes damage to and provides adequate protection of public health, welfare, or the environment).

EPA has determined that the treatment of St. Louis Park well SLP-15/10 with granular activated carbon will achieve the above requirements (See Figure 9-1 for system diagram). Other alternatives were evaluated that would provide adequate public health protection but these are not recommended for the following reasons. Interconnection with the City of Minneapolis would provide an adequate supply and has the lowest capital cost of all the alternatives. However, the cost of purchasing water over time causes the present worth cost to be significantly higher than any alternative.

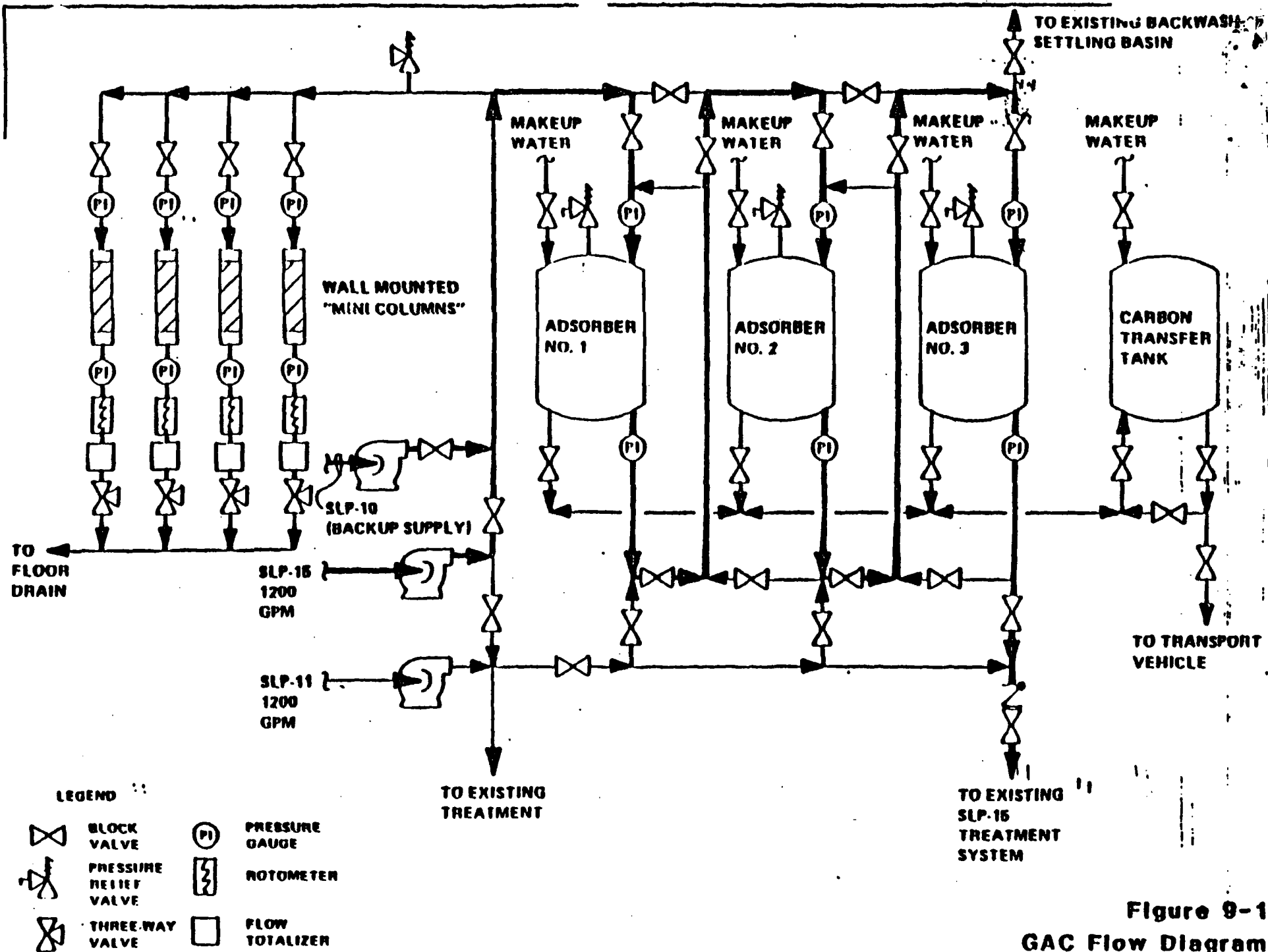


Figure 9-1
GAC Flow Diagram

Installation of deeper wells to the Mt. Simon-Hinckley aquifer is only slightly more expensive than the recommended alternative. This alternative is technically less complex than the recommended alternative since it is not dependent on a treatment system to remove PAH compounds. However, this alternative was not recommended since the experience gained when the City installed a new well in the Mt. Simon-Hinckley aquifer showed that the quantity of ground water was below the original expectation. This indicates that this aquifer may not be capable of providing the necessary quantity of ground water over a long-term. The State recognizes this situation and is concerned about future significant withdrawal of water from this aquifer. Therefore, this alternative is not recommended.

The alternative of treating contaminated water from the Prairie du Chien aquifer is the least expensive alternative to provide an acceptable water supply and has the additional advantage of mitigating the existing plume of contamination. Pumping and treatment of well SLP-15/10 will act as a barrier to contamination and allow the renewed use of wells SLP-7 and SLP-9 for drinking water use. This alternative will also help control migration of the plume and remove contamination from the environment. In addition, pumping and treatment of SLP-15/10 will probably be a component of a future remedial action to control migration of the entire plume of contamination. That action will be addressed in a future Record of Decision; however, selection of the recommended action for treatment of SLP-15/10 will reduce the cost of the future plume control action, if approved.

The recommendation for use of granular activated carbon rather than ozone is based on its lower cost and higher confidence to consistently meet the required treatment level. EPA's recommended target for carcinogenic PAH (based on benzo (a) pyrene) is 2.8 ng/l which corresponds to a 10^{-6} risk factor. Use of granular activated carbon is also recommended over ozone since GAC has been proved to be reliable over a wide range of operating conditions and is considered best available technology for water supply treatment. Therefore, granular activated carbon treatment provides the least cost with the highest flexibility and reliability of treatment.

Design and construction of a GAC system is expected to take 8 months after initiation of design. Additional funds for this task are not necessary at this time since the MPCA is able to reprogram funds available in the existing cooperative agreement. Additional funding will be requested in the future for further remedial action, as appropriate. The MPCA and Region V consider the construction of a drinking water system the highest priority for cleanup of the Prairie du Chien aquifer. Other tasks already approved and funded i.e., feasibility study for the soils and multi-aquifer well closing can be initiated this fall. However, due to the amount of data produced by Reilly Tar in its report, "Recommended Plan for a Comprehensive Solution of the Polynuclear Aromatic Hydrocarbon Contamination Problem in the St. Louis Park Area," and data produced by other sources, the scope of any future feasibility study for source control will be substantially modified. The design of the water treatment system can commence immediately upon approval of the Record of Decision since CH₂M Hill is still under contract with the MPCA for this work.

COST ESTIMATE

The total capital cost of GAC treatment is \$633,000. Piping to SLP 10 and hockup of SLP 10 to SLP 15 is approximately \$49,000. Design of the system is estimated at \$68,000, and the first year O&M Cost is estimated at \$188,000.

Therefore, the total capital cost estimate is \$750,000. The MPCA can reprogram this amount with existing funds originally obligated by EPA for IRM/FS work at the site. The first year O&M cost of approximately \$188,000 will be requested in a subsequent amendment.

OPERATION AND MAINTENANCE

The first year operational cost for which funding is requested is \$188,000. The State of Minnesota accepts the oversight responsibility of monitoring the effectiveness of the system. The State will assure the future O&M as required by section 104(c)(3) of CERCLA, but EPA and the State may seek to transfer that responsibility to either Reilly or the City, or both, through enforcement action or negotiations.

NEXT STEPS

<u>Milestones</u>	<u>Date</u>
Sign ROD	May 1984
Amend CA for Design and Construction	June 1984
Complete Design	August 1984
Complete Construction	June 1985

FUTURE REMEDIAL ACTIONS

Following completion of the feasibility study being conducted by the State, another ROD will be prepared to address the following possible actions:

- (1) Off-site remedial measures to control contaminated ground water plumes in multi-aquifers beneath the site, and
- (2) Source control measures to minimize the release of hazardous substances from the site.

PUBLIC RESPONSIVENESS SUMMARY

The MPCA has attempted to keep the residents of the affected area well informed and has made positive effort to respond to their concerns. For this purpose, the Agency hired a community relations coordinator during the course of the RI/FS work.

The public was informed of the initiation of the drinking-water feasibility study at a public meeting held on February 15, 1982, at the public high school in St. Louis Park. Approximately 100 people attended the meeting.

A second public meeting at the high school held on May 16, 1983, reported the results from the feasibility study. An audience of more than 100 people heard presentations by Executive Director, Sandra Gardebring and Michael Hansel of the MPCA, Commissioner Mary Madonna Ashton and David Gray of the Minnesota Department of Health (MDH), Paul Bitter of the U.S. EPA and representatives of CH2M-Hill and Barr Engineering, the project's contractors. Two fact sheets were distributed at the meeting covering the background of the problem and the feasibility study results.

Questions and comments about the feasibility study were solicited at the public meeting and thereafter. In addition to responding to telephone calls from concerned citizens and questions from news reporters, the MPCA has endeavored to keep the public informed of progress in several ways.

An MPCA Board - appointed citizens advisory committee made up of local residents has met monthly since the summer 1983 to provide regular communication between the MPCA and the local community. Members of that organization have heard from the MPCA, the MDH and Reilly's Technical Consultants, ERT, and deliberated the issue.

Other efforts to inform the community have included the publication of feasibility study results and articles on advisory committee progress in the city news letter sent to every resident of St. Louis Park on a bi-monthly basis. The St. Louis Park public library has received a copy of the feasibility study report, sheets, and an advisory committee statement. The availability of the fact report was announced on the City's "bulletin board" on cable television.

Because the meeting announcing the results of the feasibility study preceded a Reilly-sponsored meeting reporting the company's recommendations, many comments received in the time period immediately following the meeting considered the differences in the proposals and the progress of the litigation. A few comments urged the MPCA to consider the ERT report carefully, and considerable MPCA and U.S. EPA staff time has been spent examining ERT's work inclusions.

Questions at the public meetings fell into three main categories, (1) those considering the carbon filter system and drinking-water safety, (2) those regarding other remedial actions that may be necessary and, (3) those asking about cleanup and cost and the progress of the litigation. For instance, residences wanted to know how carbon was able to remove

contaminates from the drinking water and what happened to the spent carbon. The technology of carbon filtration and regeneration for reuse for other purposes was explained. Residents were assured that the filtered water would be tested monthly with a 3- or 4- day turnaround on test results, in response to questions about "breakthrough." One questioner wanted to know whether the carcinogenic PAH were readily adsorbed, as well as the other PAH, to which the response was "yes". A few questions regarded the PAH criteria level, which the MDH representative explained represents an expected 10^{-5} risk level. No support was expressed for the other alternatives considered by the feasibility study, including the connection with Minneapolis Water System or deep wells.

Concerns on other remedial measures included questions on the rate of groundwater movement, multi-aquifer wells and other remedial action that might be anticipated. It was explained that the study of the groundwater was not complete but the using of granular activated carbon on well 15/10 was part of an overall plan to control groundwater movement and the spread of contamination. The results of the well survey and progress on well abandonment were described. It was explained that a prohibition on new multi-aquifer wells will prevent the creation of new problems.

Several comments were received urging the agency to continue with its litigation efforts in expressing the opinion that the company should bear the cost of cleanup.

At the time of the public meeting and in the time that followed, support for the carbon filter system has been strong. A major concern remains the question of the City having to return contaminated wells to service, as it did during the summer of 1982. A water conservation committee was established by the St. Louis Park committee counsel to recommend reduced water usage (in addition to the City's ordinance regulating loss due to sprinkling during the summer months).

The City Council has adopted a resolution encouraging the MPCA to proceed with the carbon filter system. The Citizen's Advisory Committee reached consensus on a statement including similar reports. Candidates for City Council seats in the fall of 1983 elections all expressed support, as has the area's legislative delegations.

News media and public criticism has focused primarily on the delay in implementation. The community is well educated in the drinking-water problem experienced by the City over the years, and carbon filtration appears to be not only accepted but desired by the public.

NEWS & ANALYSIS

DIALOGUE

The Pursuit of Consistent Decision Making Under CERCLA

by William N. Hedeman, Jr.

The *EPA Journal* recently asked six respected observers what their response would be to the question "how clean is clean at a hazardous waste site?" They received six different answers. The Environmental Protection Agency's (EPA's) decisions in regard to selecting remedies at hazardous waste disposal sites have emerged from experience, because nowhere do existing law or Agency policy define the level of cleanup that must be achieved during a response action. In order to pursue more consistent decision making at a hazardous waste site, the Agency is considering several policies and guidance, which taken together represent movement toward broad uniformity in the decision making process.

Background

*Comprehensive Environmental Response, Compensation and Liability Act (CERCLA or Superfund)*¹

Section 104 of CERCLA grants broad authority to the President when responding to a release or substantial threat of a release of any hazardous substance or pollutant or contaminant in the environment. CERCLA authorizes the President to:

act, consistent with the national contingency plan, to remove or arrange for the removal of, and provide for remedial action relating to such hazardous substance, pollutant, or contaminant at any time . . . or take any other response measures consistent with the national contingency plan which the President deems necessary to protect the public health or welfare or the environment.²

CERCLA includes limitations on the exercise of the removal and remedial authorities. Section 104(c)(1) limits removal actions to \$1 million or 6 months unless certain enumerated conditions exist. Section 104(c)(3) and (4) require the affected state to enter into a cost-sharing cooperative agreement or contract with the President and to select a cost-effective remedy that provides a balance between the need for response at the facility under consideration and the availability of money in the Hazardous Substances Trust Fund (the Fund)³ to respond to other sites.

Mr. Hedeman is Director of the EPA Office of Emergency and Remedial Response.

1. 42 U.S.C. §§9601-9657, ELR STAT. 41941.

2. CERCLA §104(a)(1), 42 U.S.C. §9604(a)(1), ELR STAT. 41945.

3. Established by CERCLA §221, 42 U.S.C. §9631, ELR STAT. 41953.

Section 106 of CERCLA authorizes the President to secure such relief as may be necessary to abate the danger or threat when there may be an imminent and substantial endangerment to public health, welfare or the environment because of an actual or threatened release of a hazardous substance.

While Superfund provides the authority to respond to or abate a release or threat of release of a hazardous substance, pollutants, or contaminants when it is necessary to protect the public health, welfare or the environment and speaks of a cost-effective response, it does not define the desired level of cleanup.

*The National Contingency Plan (NCP)*⁴

The NCP establishes the process for determining appropriate removal and/or remedial actions at Superfund sites. Section 105 of CERCLA authorizes the President to revise the NCP from time to time. It was last revised on July 16, 1982.⁵

For purposes of the current Plan, EPA established two limited categories of situations in which removal activities were authorized. The current Plan imposes restrictions on the exercise of the statutory authority. First, the lead agency is authorized under §300.65 to conduct "immediate removal" activities when it determines that action is necessary to prevent or mitigate an immediate and significant risk of harm to human life or health or to the environment. Several examples of situations which would pose such risks are included in this section. The authority to undertake immediate removal activities is not dependent on whether the release is included on the National Priorities List (NPL). Second, under §300.67, the lead agency is authorized to undertake "planned removal" actions when it determines either that continuation of an immediate removal will result in substantial cost savings, or, that the public or environment will be at risk from exposure to hazardous substances if response is delayed at a release not on the NPL. Again, as with §300.65, the Plan cites examples of factors the Agency will use in determining whether a planned removal is warranted. Approval of planned removal

4. The NCP is mandated by CERCLA §105, 42 U.S.C. §9605, ELR STAT. 41946. It is promulgated at 40 C.F.R. pt. 300, ELR REG. 47401.

5. 47 Fed. Reg. 31180 (1982).

activities is conditioned upon, among other things, assurances that the affected State would share the costs of the activity; no such State cost-share is required for immediate removal activities.

Section 300.68 of the current NCP provides methods and criteria for determining the appropriate extent of remedial action. These provisions are organized to reflect the normal sequence for taking remedial action at a site, including discussion of how to plant remedial actions, how to array alternatives, and how to select the cost-effective alternative from among them.

The NCP provides factors to be considered in determining whether an immediate removal, planned removal, or remedial action is appropriate. It also provides for the selection of a cost effective remedial alternative that provides adequate protection of public health, welfare and the environment. However, the NCP as revised, like CERCLA, does not provide guidance on what degree of cleanup must be achieved by a response action during CERCLA cleanups.

The Problem

There is no definitive guidance available defining what the desired level of cleanup should be and there is a general lack of guidance on the processes involved in determining and implementing Superfund responses. Remedial actions at sites must be cost-effective and must provide adequate protection of public health, welfare and the environment. Difficulties arise when one attempts to define what "adequate protection" is or, in other words, what the desired level of cleanup should be. Engineers design their technologies to meet a certain goal or standard; if there is no goal or standard, their job becomes much more difficult. At the same time, however, it must be recognized that a certain amount of site-by-site discretion will always be needed in developing the engineering and technical aspects of remedies at Superfund sites. In the end, the public must be assured that the remedies selected will provide an adequate protection of public health, welfare and the environment.

Although the NCP provides methods and criteria for determining the appropriate remedy in a response action, further guidance is needed to provide a concise description of the necessary steps leading to the implementation of response actions. This type of guidance will provide for increased consistency in the decision making process for Superfund sites.

The solution, therefore, is to develop guidance that establishes those standards that will be considered in achieving the desired level of cleanup; and also guidance that describes the necessary steps leading to the implementation of response actions. This will allow EPA to pursue a course of consistent decision making.

The following policy initiatives illustrate how EPA is pursuing a course of consistent decision making. These policies and guidance are related efforts, and some aspects of one policy are incorporated into other policies.

Policy Initiatives

CERCLA Compliance With Other Environmental Statutes:

- ☐ *Off-Site CERCLA Response Actions.* Section 101(24)

of CERCLA enunciates a policy against off-site transport of hazardous substances. They are to be kept on-site unless transport to another facility is more cost-effective than other remedial actions, will create new capacity to manage hazardous substances in compliance with Subtitle C of the Resource Conservation and Recovery Act (RCRA),⁶ or is necessary to protect public health or welfare or the environment from a present or potential risk which may be created by the continued presence on-site of such substances. Section 104(c)(3)(B) requires states to make assurances regarding the availability of hazardous waste disposal facilities that are in compliance with Subtitle C of RCRA, in the event that off-site treatment, storage, or disposal of hazardous substances is to be used in any remedial action.

The Office of Solid Waste and Emergency Response (OSWER) has issued a policy⁷ that addresses compliance with other environmental laws when CERCLA responses require wastes to be removed from the site and disposed of elsewhere. That policy deals with the interaction between RCRA and CERCLA of off-site treatment, storage or disposal of hazardous substances. The general principle is that all hazardous substances transported off-site should be taken to a hazardous waste management facility that either has a RCRA permit or has interim status under §3005(e) of RCRA. Second, the off-site alternative must be cost-effective in comparison to other response actions that would also provide adequate protection of public health, welfare and the environment. Third, if a RCRA compliance inspection has not been completed within the last 12 months, a new inspection must be completed before any hazardous waste management facility can receive hazardous substances from a CERCLA-funded response. The inspection must demonstrate that there are no significant violations that affect the satisfactory operation of the facility. This decision reflects the conclusion that the provision in §§101(24) and 104(C)(3)(B) evidenced Congressional intent that any off-site treatment, storage, or disposal of hazardous substances in CERCLA remedial actions be conducted at facilities that are in compliance with Subtitle C of RCRA.

Removal actions involving off-site transport of hazardous substances also are covered by this policy, although the requirement for inspection is not applicable to removal actions due to time constraints. However, even for removal action, Agency policy encourages transport of hazardous substances to hazardous waste management

6. 42 U.S.C. §§6901-6987, ELR STAT. 41901.

7. Memorandum from William N. Hedeman, Jr. to Regional Administrators on Requirements for Selecting an Off-Site Option in a Superfund Response Action (Jan. 28, 1983), and Memorandum from Lee Thomas to Regional Administrators on Revision of Policy on Requirements for Selecting Off-site Options in Superfund Response Actions (June 22, 1984).

ELR Staff Changes

With this issue, ELR welcomes a new Legal Intern. Barnett Lawrence is a second-year student at Georgetown University Law Center. Barney was graduated *magna cum laude* from the University of Maryland, where he majored in Economics. He has experience as an Assistant to the Policy Analyst at NOAA's Office of Coastal Resource Management. We look forward to Barney's professional and personal contributions to ELR.

facilities that have been previously inspected and found to be acceptable.

□ **On-Site CERCLA Response Actions.** The Agency is currently considering a policy on the applicability of the standards, criteria, advisories, and guidance of federal and state environmental and public health statutes to on-site response actions taken pursuant to §§104 and 106 of CERCLA. The policy under consideration divides environmental requirements of other federal and state laws into two categories: (1) those *standards* that are "applicable or relevant," which must be met unless one of five circumstances exists; and (2) other federal and state criteria, advisories and guidance, which are to be considered in developing that remedy. Generally, "applicable" standards are those that would be legally applicable absent CERCLA actions. "Relevant" standards are those designed to apply to problems sufficiently similar to those encountered at CERCLA sites that their application is appropriate, although not legally required. Standards are also relevant if they would be legally applicable to the CERCLA cleanup but for jurisdictional restrictions associated with the requirement. For example, while RCRA site closure regulations might not be legally applicable to a "typical" CERCLA facility that ceased operations prior to the effective date of RCRA, these regulations would generally be relevant to a determination of what type of capping or monitoring would be necessary to adequately protect health and the environment. Similarly, while RCRA may not give jurisdiction to require monitoring or corrective action with respect to a plume of contaminated groundwater that extends beyond a facility's boundaries, RCRA groundwater corrective action requirements may be relevant in determining when corrective action is necessary to adequately protect public health and the environment.

In determining the appropriate remedy as it relates to other federal standards, the first step is to consider the extent to which the standards are, in fact, applicable or relevant to the unique circumstances at the site. Recognizing that the environmental standards under RCRA were developed to regulate currently active hazardous waste disposal operations and facilities, some Superfund sites involve situations in which the RCRA regulations would neither be applicable, nor perhaps even relevant. For example, the indiscriminate disposal of waste over 200 miles of roadway, or the contamination of river beds were never intended to be regulated under RCRA. In such situations, RCRA standards would not be applicable, but parts of the RCRA or TSCA standards may be relevant in determining the final level of cleanup.

The proposed policy for on-site response actions would apply as follows:

- For removal actions, EPA's policy is to pursue actions that will meet applicable or relevant standards and criteria of other federal environmental and public health laws to the maximum extent practicable, considering the exigencies of the situation;
- For remedial actions, EPA's policy is to pursue remedies that attain applicable and relevant standards of other federal public health and environmental laws, with specific circumstances where those standards may not be achieved; and
- CERCLA procedural and administrative requirements

will be modified to provide safeguards similar to those provided under other laws, but a RCRA permit is not required for on-site response actions taken under the Fund-financed or enforcement authorities of CERCLA.

Applicable or relevant standards need not be met by CERCLA remedial actions in the following situations:

- **Interim Measures:** If the selected remedy is not the final remedy for the site, it might be impractical or inappropriate to apply other environmental standards. For example, it might be appropriate to treat contaminated drinking water at the tap as an interim measure, pending final decisions on the appropriate extent of cleanup of the contaminated aquifer itself;
- **Fund-Balancing:** As provided in §104(c)(4) of CERCLA, for Fund-financed actions only, the lead agency will balance the need for protection of public health, welfare and the environment at the site against the amount of money available in the Fund to respond to other sites. Thus, the decision maker could select a remedy that does not meet an otherwise applicable or relevant public health or environmental standard if complying with that standard would be disproportionately costly, and Fund monies could be more productively used at another site where a response was necessary;
- **Unacceptable Environmental Impacts:** In some cases, it might be possible to meet applicable or relevant federal standards, but compliance might result in significant adverse environmental impacts. This might be the case, for example, when dredging contaminants from the bottom of a body of water to levels required by environmental standards would result in more harm to the ecosystem than an alternative remedial response;
- **Technical Impracticability:** This situation could occur when it is technically impracticable, from an engineering perspective, to achieve the standard at the specific site. For example, although the environmental standard may require that contaminated groundwater attain background levels, this may be impracticable because of the unique hydrogeologic conditions. Another example is where the site is characterized by a steep slope and the standard would require a cap. While the placement of a cap on a steep slope could be possible technically, it would not be practicable because of long-term problems with maintaining the integrity of the cap. This decision would not be based on a cost/benefit determination, however; and
- For enforcement actions under §106 of CERCLA only, the decision maker could choose not to meet an otherwise applicable or relevant standard if the fund is unavailable, there is a strong public interest in an expedited clean up, and the litigation probably would not result in the desired remedy. For example, this situation could occur where the defendant lacks sufficient resources to pay for a complete remedy or where liability is in question and the Fund is unavailable and the public interest is served by expeditious cleanup. One situation where the Fund is unavailable is where the state does not have sufficient funds to make the necessary state cost-share match.

Three important qualifications apply to these situations. First, in EPA's experience they will only occur infrequently. That is, most remedial actions *will* conform to applicable or relevant federal public health and environmental standards. Second, when these circumstances exist, they will not result in selection of a remedy that disregards health and environment concerns; rather, the decision maker will select the alternative that most closely approaches the level of protection provided by the applicable or relevant standard, considering the circumstances which prevented meeting the standards. Third, the basis

for not meeting the standard will be fully documented and explained in the appropriate decision documents.

EPA will use federal health and environmental criteria, advisories, or guidance or state standards in developing the appropriate remedial response at a site, especially where there are no applicable or relevant federal standards. If EPA determines that these criteria, advisories, or guidance or state standards are relevant, but are not used in the selected remedial alternative or are substantially adjusted, the decision documents will indicate the basis for adjusting or not using them.

Proposed Changes To the NCP

Proposed amendments to the NCP are currently under Agency review. Several proposed changes would result in a more uniform decision making process. EPA may eliminate the distinction between immediate and planned removals and establish a new standard for removals. A second amendment would incorporate the CERCLA-compliance-with-other-environmental-laws policy into the NCP. Also under consideration are additions to the NCP section on Development of Alternatives. Finally, EPA may clarify the term "cost-effective" in the context of selection of the appropriate extent of remedy.

The Agency is considering eliminating immediate and planned removals and initial remedial measures as distinct response categories, and expanding the criteria for conducting removals. The distinction between problems that pose "immediate and significant risk" (and thus are eligible for immediate removal action) and those situations that pose lesser risks (and thus are eligible only for planned removal treatment) is often difficult in practice. As a result decisions as to whether the action was an immediate or planned removal have been inconsistent. Although some situations are obviously within the immediate removal category, for others the question is more difficult. Time spent in properly classifying actions and documenting the "immediacy" and "significance" of the risk to health and the environment can delay necessary response and consume significant amounts of staff and decision maker's time. This not only may delay necessary response, but also may result in an unproductive expenditure of Fund resources.

The Agency is considering incorporating the CERCLA-compliance-with-other-environmental-statutes policy into the proposed amendments to the NCP. That policy is discussed in the preceding section.

The current NCP requires the development of alternative remedial responses for consideration by the decision maker. The proposed changes would spell out in greater detail the range of alternatives that should be developed. These include off-site treatment or disposal alternatives and the no-action alternative, as well as alternatives designed to implement the proposed policy regarding compliance with other environmental requirements. The feasibility study would develop alternatives that attain, exceed, and fall short of other environmental requirements, to aid the decision maker in determining the alternatives that consider relevant criteria, guidance or advisories, especially where there are not relevant or applicable federal standards. Finally, where appropriate, the feasibility study would take into account alternative tech-

nologies, such as waste minimization, destruction, and recycling.

The final major change under consideration would clarify the meaning of the term "cost-effective" in the context of selection of the appropriate extent of remedy. Section 300.68(j) in the current NCP provides that the agency shall select the alternative that is "cost-effective (i.e., the lowest-cost alternative that is technologically feasible and reliable and which effectively mitigates and minimizes damage to and provides adequate protection of public health, welfare, or the environment.)" Unfortunately, this language has given many observers the erroneous impression that EPA was required in all cases to select the *lowest-cost* remedy that provided *minimally adequate* protection of public health, welfare and the environment. EPA did not intend, nor does it believe that CERCLA requires, that cost-effectiveness be defined in such narrow terms.

Therefore, EPA is considering elimination of the reference to selection of the "lowest cost alternative." Instead, 300.68(i) would simply provide that the appropriate extent of remedy shall be determined by selection of a cost-effective remedial alternative that effectively mitigates, minimizes, and provides adequate protection of public health, welfare, and the environment. Under the proposed revisions, this requires the selection of a remedy that at a minimum, attains or exceeds applicable or relevant federal public-health-or-environmental standards.

Preparation of Decision Documents For Approving Fund-Financed and Potentially-Responsible-Party Remedial Actions

Guidance has been prepared to assist EPA Regional Offices in preparing the decision documents required for the approval of Fund-financed and potentially-responsible-party (PRP) remedial actions. A Record of Decision (ROD) will be required for all remedial actions financed with monies from the Fund. The ROD will document the Agency's decision making process and demonstrate that the requirements of CERCLA and the NCP have been met. This will provide the basis for future cost recovery actions that may be undertaken.

A ROD will be used for sites where PRPs exist and negotiations may occur to determine if the PRPs will implement the approved remedy. When the EPA Regional Administrator determines that greater flexibility is required to negotiate with PRPs, an exemption to the ROD process would be allowed. A Negotiations Decision Document will be prepared to approve the range of negotiation flexibility. Following completion of negotiations, an Enforcement Decision Document will be prepared to approve remedial actions to be implemented by PRPs.

The primary purpose of the ROD and supporting information is to document that the remedial action is consistent with CERCLA and the NCP. Generally, this will involve making the determinations required by CERCLA and the NCP in the ROD signed by the designated decision maker. In most cases, this is the Assistant Administrator, OSWER; however, many of these decisions will be delegated to the Regional Administrators during Fiscal Year 1985. In addition, the key steps of the Remedial Investigation/Feasibility Study (RI/FS) must be

summarized in the Summary of Remedial Alternative section to show that the NCP decision making process has been followed. If the RI/FS does not contain the required information (such as an evaluation of alternatives that attain and exceed applicable and relevant federal public and environmental standards) the ROD package must include this information. In this way any significant gaps in the RI/FS will be filled. The ROD must have the following summary information.

- *Consistency with NCP.* The summary information must show that alternatives were developed, screened, and evaluated in accordance with §§300.68(g) through (i) of the NCP. When the feasibility study is adequate in this area, the ROD document should briefly summarize the process and reference the feasibility study for additional information.

- *No-action alternative.* Under §300.68(g) of the NCP, the Agency evaluates a no-action alternative. The ROD summary must document that the no-action alternative was evaluated and describe the reasons for selection of an action (e.g., the release poses an actual or potential threat to public health or the environment), or the acceptance of no action as the final decision.

- *Extent of remedy.* The ROD summary must explain how the level of cleanup for the recommended remedy was determined. The remedial action may be based on applicable and/or relevant federal public health or environmental standards. When standards are used, the ROD summary must document how the standards will be applied and describe the engineering approach to cost-effectively implement the standards. When existing standards, criteria, or regulations are not relevant, the approach used to establish a level of cleanup must be developed in consultation with national EPA guidance. If the recommended alternative does not attain or exceed applicable or relevant standards, the ROD summary must describe how the circumstances for noncompliance are consistent with EPA policy.

- *Cost estimates.* Costs must be shown for all final alternatives evaluated in the feasibility study. A table showing the remedial action cost, annual operation and maintenance (O&M) cost, and total present worth should be included. It is important to evaluate the accuracy of cost estimates. Expected accuracies for feasibility study estimates should be within +50 and -30 percent of the actual cost estimates. Remedial investigation data should be sufficient for this purpose. If existing data cannot support an adequate cost estimate, submission of the ROD should be delayed until additional field data can be collected and the cost estimates revised.

- *Cost-effectiveness evaluation.* The factors used to screen and evaluate alternatives are described in §§300.68(h) and (i) of the NCP. The ROD summary must describe the factors used to screen and evaluate alternatives. The feasibility study must include a narrative description of the advantages and disadvantages of each factor for all alternatives. These should be summarized in the ROD summary.

- *CERCLA §101(24).* If all or part of the recommended remedial action involves off-site transport, storage, destruction, or disposal of hazardous wastes, the requirements of §101(24) must be met. The remedial action, or component involving off-site activities, must be more cost-effective than other remedial actions, create new capacity to manage hazardous substances in addition to those at the facility, or be necessary to protect public health, welfare, or the environment from a present or potential risk. This determination is included in the ROD and must be discussed in the ROD summary document.

- *Responsiveness Summary.* Draft RODs should summarize citizen and potentially responsible party concerns known at that time. The responsiveness summary, included as a part of the final ROD package, must include a summary of comments received before and during the public comment period as well as activities conducted by EPA or the state to elicit citizen input. Comments from all parties, including potentially responsible parties, must be included. The summary must respond to comments and discuss in detail: (1) any changes made due to comments received; (2) how the selected remedy differs from the community or potentially responsible parties' preferred alternative; and (3) any alternatives recommended that were not evaluated in the feasibility study.

- *Operation and Maintenance.* If the recommended remedial action requires future O&M, the ROD should describe the O&M activities being approved. The ROD summary should describe the estimated duration and cost of O&M activities. It should also describe the funding requested from EPA and the State's mechanism for funding and carrying out the O&M activities.

Conclusion

EPA anticipates that the proposed changes to Agency policy, the NCP, and guidance on Agency decision documents relating to the selection of CERCLA response actions will improve the Agency's goal of better, more consistent decision-making. All of the actions under consideration, as described above, are the product of over four years of experience in implementing the Superfund program.

COPY

UNITED STATES DISTRICT COURT
DISTRICT OF MINNESOTA
FOURTH DIVISION

United States of America,
et al,

Civil File No. 4-80-469

Plaintiff,

v.

MEMORANDUM ORDER

Reilly Tar & Chemical Corpor-
ation, et al,

Defendants,

and

Reilly Tar & Chemical Corpor-
ation,

Civil File No. 3-85-473

Plaintiff,

v.

United States of America, et al,

Defendants.

Edward J. Schwartzbauer, Michael J. Wahoske, James R. Dorsey and Rebecca A. Comstock appeared on behalf of Reilly Tar & Chemical Company. David Hird, Donald Hornstein and Francis X. Hermann appeared on behalf of the United States. Stephen Shakman and Lisa Tiegel appeared on behalf of the State of Minnesota. Thomas E. Mielenhausen appeared on behalf of the City of St. Louis Park.

At issue in this case is the constitutionality of the punitive damages provision of the Comprehensive Environmental Response Compensation and Liability Act of 1980 (CERCLA), 42 U.S.C. § 9601 et. seq., and the penalty provision of the Minnesota Environmental Response and Liability Act (MERLA), Minn.

Stat. § 115B et seq. (1984). This matter is before this court upon Reilly Tar's motion for a preliminary injunction seeking to prevent the accrual of the penalty provisions of CERCLA and MERLA. This action has an extensive litigation history and a brief recitation of that history is necessary in order to understand the issue raised by Reilly Tar's motion.¹

BACKGROUND

Reilly Tar & Chemical Corporation (Reilly Tar) operated a plant in St. Louis Park, Minnesota where it processed coal tar into creosote and treated wood products with creosote. The plant was operational between 1917 and 1972 and during that time Reilly Tar disposed of chemical wastes at the St. Louis Park facility. As early as 1933, a dispute erupted between the City of St. Louis Park and Reilly Tar over Reilly Tar's method of disposing of its chemical wastes and the possibility that it had contaminated the underground water supply in the area.

The dispute between the City and Reilly Tar resulted in the State and City filing a lawsuit against Reilly Tar in state court in 1970. See State of Minnesota, et al v. Reilly Tar & Chemical Corp., File No. 670767 (4th Jud. Dist. Minn.). That lawsuit

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There are actually two actions before this court. United States v. Reilly Tar, Civil File No. 4-80-469 is the main action which has been pending before this court for over four years. The other action, Reilly Tar v. United States, Civil File No. 3-85-473 is a new action which was filed specifically for the purpose of bringing this preliminary injunction. It appears as though Reilly Tar filed the second action, adding certain individual defendants, in the hope of avoiding any abstention or Eleventh Amendment immunity issues that might be raised.

ended in a settlement in 1973 whereby the City of St. Louis Park purchased the Reilly Tar site and entered into an agreement with Reilly Tar which provided that:

The City hereby agrees to hold Reilly harmless from any and all claims which may be asserted against it by the State of Minnesota, acting by and through the Pollution Control Agency, and will be fully responsible for restoring the property, at its expense, to any condition that may be required by the Minnesota Pollution Control Agency.

The State of Minnesota never signed the settlement document or executed a dismissal of the Reilly Tar action. In 1978, the State of Minnesota amended its complaint in the state court action alleging claims of groundwater contamination and the City of St. Louis Park intervened.

In 1980 the United States commenced this action under the Resource Conservation and Recovery Act of 1976 (RCRA), 42 U.S.C. § 6973. Three weeks after filing this action, the United States amended its Complaint to allege a cause of action under the Comprehensive Environmental Response Compensation and Liability Act of 1980 (CERCLA), 42 U.S.C. § 9601 et. seq. The State of Minnesota, the City of St. Louis Park and the City of Hopkins subsequently intervened and since that time the state court action against Reilly Tar has remained dormant. In this action the United States is seeking injunctive relief to abate soil and groundwater contamination caused by Reilly Tar's operation of its St. Louis Park plant, as well as recovery of certain costs incurred in connection with the cleanup of the Reilly Tar site.

Reilly Tar claims that this lawsuit was settled in 1973 and that, to the extent it was not settled, the City of St. Louis Park is liable for cleanup costs because it entered into a hold harmless agreement with Reilly Tar. The City of St. Louis Park has taken the position that the 1973 settlement did not contemplate groundwater contamination.

In November of 1984, this court issued a Case Management Order setting discovery deadlines and dividing this trial into two phases. Phase I of the trial will encompass those issues brought under RCRA, CERCLA and certain common law theories focusing upon the appropriate remedy for cleaning up the Reilly Tar site. Phase II of the trial will focus upon the issues related to the 1973 settlement of the state court action and the applicability of the hold harmless clause.

On August 1, 1984, the Environmental Protection Agency (EPA) issued an administrative order requiring Reilly Tar to construct and maintain a granular activated carbon water treatment system to purify the water drawn from St. Louis Park wells. On December 18, 1984 the Minnesota Pollution Control Agency (MPCA) issued a Request for Response Action (RFRA) to Reilly Tar ordering it to perform, according to a predetermined schedule, the remedial actions requested by the State of Minnesota in this action. The issuance of the EPA administrative order and the RFRA by the MPCA are the events which trigger the imposition of the punitive damages and penalty provisions of CERCLA and MERLA. With respect to both the state and federal orders Reilly Tar contends the

remedial action it has been ordered to perform is far more expensive than what is required to remedy properly the pollution problem at the Reilly Tar site. The dispute over the appropriate remedy is the primary issue before this court in Phase I of this trial which is scheduled to begin in September. Accordingly, Reilly Tar has refused to comply with both the state and federal order.

STATUTORY SCHEME -- CERCLA AND MERLA

Before examining in detail the nature of Reilly Tar's constitutional attack upon the penalty provisions of CERCLA and MERLA, it is necessary to briefly outline the relevant provisions of those statutes. The Comprehensive Environmental Response, Compensation and Liability Act, in order to effectuate the twin goals of cleaning up hazardous waste sites as well as holding responsible parties liable for the cost of cleanup, established several different methods for an agency to ensure the clean up of a hazardous waste site. One option of the EPA is to utilize Superfund money to clean up the site and then institute a cost recovery action against the responsible parties. 42 U.S.C. § 9607(4). See Aminoil, Inc. v. United States E.P.A., 599 F.Supp. 69, 73 (C.D. Cal. 1984).

Because the number of sites far exceed the available dollars in the Superfund, however, Congress established a second method for cleaning up hazardous waste sites. The second method established by Congress calls for the EPA to order a responsible

party to clean up a hazardous waste site. 42 U.S.C. § 9606(a). Aminoil, 599 F.Supp. 69 at 73. Within this second method the EPA has two options available to it. First, it may institute an enforcement action in court in which it seeks to have the court issue a mandatory injunction delineating the specific type of cleanup required. 42 U.S.C. § 9606(a). That is the option the EPA initially chose to follow in this case. Another agency option is to issue an administrative order, such as the order recently issued to Reilly Tar, ordering an allegedly responsible party to clean up utilizing the remedial method chosen by the agency. Id.

At this point in the discussion of CERCLA it is important to note that the appropriate remedial action is at the heart of the dispute between Reilly Tar and the governmental entities in this action. It is Reilly Tar's contention that the clean up proposed by the federal government, the construction and operation of a granular activated carbon treatment system in St. Louis Park, is far more expensive than is necessary in order to alleviate any danger to the St. Louis Park water supply. Reilly Tar has strenuously argued that it is unfair for the government, after four years of litigation in which the government has sought to have the court determine the appropriate remedy for the Reilly Tar site, to preempt suddenly the court's authority by ordering Reilly Tar to comply with the EPA's determination of the appropriate remedy.

In response to the EPA order, Reilly Tar has several options. First, Reilly Tar may comply with the EPA order and expend the funds required for the remedy advocated by the EPA. However, if Reilly Tar complies with the EPA order and it is subsequently found at trial that the EPA remedy was unnecessary, Reilly Tar has no right of reimbursement to recover its expenses incurred in the cleanup. Aminoil, Inc. v. United States E.P.A., 599 F.Supp. 69, 73-74 (C.D. Cal. 1984). Thus, if Reilly Tar complies with the EPA order there will be no meaningful opportunity to test the merits of the EPA order.

Reilly Tar's second option, the one apparently chosen in this action, is to refuse to comply with the order of the EPA. If Reilly Tar refuses to comply with the order of the EPA and the EPA then expends Superfund money to clean up the site, this action will be converted from an action seeking a mandatory injunction against Reilly Tar to a cost recovery action. However, by refusing to comply with the EPA order Reilly Tar also exposes itself to liability under the punitive damages provisions of CERCLA. 42 U.S.C. § 9607(c)(3) provides that:

If any person who is liable for a release or threat of release of a hazardous substance fails without sufficient cause to properly provide removal or remedial action upon order of the President pursuant to section 9604 or section 9606 of this title, such person may be liable to the United States for punitive damages in an amount at least equal to, and not more than three times the amount of any costs incurred by the Fund as a result of such failure to take proper action.

The order issued by the EPA to Reilly Tar is an order under section 9606 and, hence, if Reilly Tar does not have "sufficient cause" for resisting the EPA's order, it may be liable for treble damages.

The Minnesota Environmental Response and Liability Act provides a parallel, though slightly different, mechanism for cleaning up hazardous waste sites. Just as with CERCLA, MERLA established a superfund to be used to clean up sites with state money if necessary. Minn. Stat. § 115B.20 (1984). However, in order to preserve state resources for those cases where they are truly needed, the MPCA may not utilize superfund money unless it has first requested that a responsible party perform the clean up. Minn. Stat. § 115B.17(1)(a)(1) (1984). That request is known as a request for response action (RFRA). The MPCA issued a Request for Response Action to Reilly Tar. A second prerequisite to obtaining access to superfund money is that the agency determine that no responsible party will perform the requested remedial action. Minn. Stat. § 115B.17(1)(a)(3). This determination is made in a document known as a Determination of Inadequate Response (DIR). Only after a determination is made that no responsible party will pay for the requested remedial action can the MPCA use its superfund money. Section 115B.18(1) of MERLA provides in part that:

Any person responsible for a release or threatened release from a facility...shall forfeit and pay to the state a civil penalty in an amount to be determined by the court of not more than \$20,000 per day for each day that the

person fails to take reasonable and necessary response actions or to make reasonable progress in completing response action.

For failing to comply with the state RFRA, § 115B.18(1) exposes Reilly Tar to fines of up to \$20,000 per day.

Due Process

Reilly Tar argues that the possibility that it will be found liable for punitive damages is so onerous that it is effectively precluded from testing the merits of the EPA and MPCA orders. The argument of Reilly Tar centers around a principle of law that finds its origins in Ex Parte Young, 209 U. S. 123 (1908). In Ex Parte Young the issue before the Court was the validity of certain penalty provisions for violation of a Minnesota statute which set maximum railroad freight charges. Under the Minnesota statute a railroad violating the maximum freight provisions was subject to heavy penalties and its officers and directors were subject to possible imprisonment. There was no opportunity for preenforcement review of the validity of the statute and the only way to it was to violate its provisions and be subject to penalty provisions and possible imprisonment. The U. S. Supreme Court held the statute unconstitutional on its face. Ex Parte Young, 209 U.S. 123, 147 (1908). The rationale of the Court's decision in Ex Parte Young was that a statute denies due process if the penalties for disobeying it are so severe that they effectively intimidate a party into not seeking judicial review. As the Court stated:

It may therefore be said that when the penalties for disobedience are by fines so enormous and imprisonment so severe as to intimidate the company and its officers from resorting to the courts to test the validity of the legislation, the result is the same as if the law in terms prohibited the company from seeking judicial construction of laws which deeply affect its rights.

Id. at 147.

Since Ex Parte Young, other cases have been decided upon a similar rationale. See Oklahoma Operating Co. v. Love, 252 U.S. 331 (1920). In Love an Oklahoma statute established a commission with authority to set the maximum rates for laundry work. The statute permitted the commission to impose a penalty of up to \$500 per day for each day in which a laundromat charged rates higher than those permitted by the commission. As in Ex Parte Young, there was no provision for preenforcement review and the only way of challenging the validity of the statute was to ignore its prohibitions and be subject to its penalties. In finding the statute unconstitutional the Court adopted the Ex Parte Young rationale stating that:

By boldly violating an order a party against whom it was directed may provoke a complaint; and if the complaint results in a citation to show cause why he should not be punished for contempt, he may justify before the Commission by showing that the order violated was invalid, unjust or unreasonable. If he fails to satisfy the Commission that it erred in this respect, a judicial review is opened to him by way of appeal on the whole record to the Supreme Court. But the penalties, which may possibly be imposed, if he pursues this course without success, are such as might well deter even the boldest and most confident.... Obviously a

judicial review beset by such deterrents does not satisfy the constitutional requirements, even if otherwise adequate,

Id. at 336-37. It is important to note that, while the penalty provisions in Love were not mandatory, they were imposed by a nonjudicial tribunal before the action was reviewed in a court.

In both Ex Parte Young and Love the statutes did not provide for preenforcement review of the validity of an order. In Ex Parte Young the penalty provisions were mandatory and it was not a defense that a party asserted a good faith challenge to the validity of the statute. In Love, while the statutory penalties were not absolutely mandatory, they were imposed by the agency enforcing the order before any opportunity for review in a court. Moreover, it was no defense to the imposition of penalties that a person subject to the order contested its validity. For those reasons, the statutes did not satisfy due process.

The significance of these features can be seen in more recent decisions of the Supreme Court. For example, in Reisman v. Caplin, 375 U.S. 440 (1964), the taxpayer petitioners challenged the constitutionality of § 7210 of the 1954 Internal Revenue Code which provided that any person subject to a subpoena who neglected to appear or produce books and accounts "shall, upon conviction thereof, be fined not more than \$1,000, or imprisoned not more than one year or both...." See Reisman, 375 U.S. 440, 446 n.5 (1964). The petitioners argued that the penalties for refusal to comply with the subpoena were so severe as to amount to a denial of due process. The Court found that

the statute did not apply to situations where a witness appeared and interposed a good faith defense to a subpoena. Rather, its provisions applied only where a witness failed to appear or produce documents. The Court, in upholding the validity of the statute, noted that

It is sufficient to say that noncompliance is not subject to prosecution thereunder when the summons is attacked in good faith.

Reisman, 375 U.S. 440 at 448. See also, Dan J. Sheehan Company v. Occupational Safety and Health Review Commission, 520 F.2d 1036 (5th Cir. 1975), cert. denied, 424 U.S. 965 (1976) (good faith defense to imposition of retroactive penalties coupled with judicial review sufficient to sustain statute).

The decisions of the Supreme Court in Ex Parte Young and its progeny clearly establish that a person has a due process right to challenge the validity of an administrative order affecting his affairs without being forced to pay exorbitant penalties if the challenge is unsuccessful. Ex Parte Young, 209 U.S. 123 (1908); Brown & Williamson Tobacco Corp. v. Engman, 527 F.2d 1115 (2d Cir. 1975). The rationale of Ex Parte Young and its progeny is that the imposition of severe penalties effectively denies a person subject to the penalties the right to a judicial review of the validity of an order and that such a denial of judicial review is a violation of due process. However, Ex Parte Young and its progeny also establish that a statute imposing penalties for noncompliance with an administrative order will be constitutional if it is a defense to the imposition of penalties that the

party disobeying the administrative order interposed a good faith defense to the validity of the order. It follows that a person will not be intimidated into not seeking judicial review if he knows that good faith is a defense to the imposition of penalties.

To determine whether the punitive damages provisions of CERCLA and MERLA fall within the proscription of Ex Parte Young and its progeny, it is necessary for this court to examine both the statutory language and legislative history of the relevant statutory provisions. Specifically, the court must determine whether CERCLA and MERLA provide a sufficient defense to the imposition of punitive damages to satisfy the due process clause.²

Due Process and CERCLA Punitive Damages Provision

In recent years the United States Supreme Court has emphasized that in determining the meaning of a statute the starting point is the language of the statute itself. North Dakota v.

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The court would note that if the statute provided for preenforcement review of the EPA's order the constitutional problem raised by Reilly Tar would likely be cured. However, those courts that have considered the issue have generally concluded that an administrative order is not subject to immediate review. See e.g., Lone Pine Steering Committee v. EPA, 22 Env't. Rep. Cas. (BNA) 1113 (D. N.J. 1985); Aminoil, Inc. v. EPA, 599 F. Supp. 69, 71 (C.D. Cal. 1984); Earthline Co. v. Rin-Buc, Inc., 21 Env't. Rep. Cas. (BNA) 2161 (D. N.J. 1984); United States v., Outboard Marine Corp., 22 Env't. Rep. Cas. (BNA) 1124 (N.D. Ill. 1984).

United States, 460 U.S. 300, 312 (1983). Where the language of a statute is clear on its face there is no need to examine the legislative history of a statute.

Section 9607(C)(3) of CERCLA provides that a person who fails:

without sufficient cause to properly provide removal or remedial action...may be liable to the United States for punitive damages....

Id. The first point to note about § 9607 is that a person may only be held liable for punitive damages if he does not have sufficient cause to disobey an order. A person with sufficient cause to resist an order may not, under any circumstances, be held liable for punitive damages under § 9607(c)(3). As for those persons who do not have sufficient cause to resist an order the statute provides that they may be liable for punitive damages. It is important to note that the statute does not say that a party who disobeys an order without sufficient cause "shall" be liable for punitive damages. Thus, even without an understanding of the precise contours of what constitutes "sufficient cause" to disobey an order, the plain language of the statute does not provide for mandatory penalties.

To determine whether there is sufficient flexibility in the punitive damages provision to satisfy the concerns of Ex Parte Young and its progeny, this court must attempt to determine what constitutes "sufficient cause" to disobey an order. The only court to squarely address the meaning of the "sufficient cause"

language of § 9607(c)(3) found the punitive damages provision of CERCLA to be unconstitutional. Aminoil, Inc. v. United States E. P. A., 599 F. Supp. 69 (C.D. Cal. 1984). In Aminoil the court enjoined the imposition of CERCLA's treble damages provision as a violation of the due process clause. In determining that the punitive damages provision of CERCLA violated due process, the court first noted the lack of any pre-accrual review of the administrative order. Aminoil, 599 F.Supp. 69, 73 (C.D. Cal. 1984). The court then analyzed the "without sufficient cause" language of § 9607(c)(3). The court stated that while the penalty provisions would not be applied to one who had sufficient cause for noncompliance,

Such a defense appears to be extremely limited. After examination of the legislative intent behind CERCLA, it appears that "sufficient cause" as used in the statute is to be narrowly construed.... "Sufficient cause" does not appear to apply to situations in which alleged responsible parties in good faith assert a reasonable defense that is ultimately rejected by the court.

Aminoil, 599 F.Supp. 69, 73. The Aminoil court's conclusion that the "sufficient cause" defense did not encompass a good faith defense to the proposed remedial action was critical to its con-

clusion that the punitive damages provision was unconstitutional.³

The basis of the Aminoil court's interpretation of the "sufficient cause" language was the legislative history of CERCLA. The only specific reference to the "without sufficient cause" language this court is aware of in the legislative history to CERCLA is found in the Senate debates. Senator Stafford, the author of the bill, stated his opinion of what would constitute sufficient cause for refusing to comply with an administrative order in the following colloquy:

MR. SIMPSON. Under section 107(c)(3), punitive damages may be imposed only when the failure to take proper removal or remedial action upon order is "without sufficient cause." What is intended by the phrase "without sufficient cause"?

Mr. STAFFORD. We intend that the phrase "sufficient cause" would encompass defenses such as the defense that the person who was the subject of the President's order was not the party responsible under the act for the release of the hazardous substance. It would certainly be unfair to assess punitive damages against a party who for good reason believed himself not to be the responsible party. For example, if there were, at the time of the order, substan-

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It is a well established principle of statutory construction that where a court has a choice between interpreting a statute in a constitutional and unconstitutional manner, a court is bound to select that interpretation which upholds the statute constitutionally. This principle is especially true where the basis for interpreting the penalty provision of CERCLA in an unconstitutional manner is the legislative history of CERCLA and not the language of the statute. Thus, this court respectfully disagrees with the Aminoil court's interpretation of the "without sufficient cause" language of § 9607(c)(3).

tial facts in question, or if the party subject to the order was not a substantial contributor to the release or threatened release, punitive damages should either not be assessed or should be reduced in the interest of equity. There could also be "sufficient cause" for not complying with an order if the party subject to the order did not at the time have the financial or technical resources to comply or if no technological means for complying was available.

We also intend that the President's orders, and the expenditures for which a person might be liable for punitive damages, must have been valid. In particular, they must not be inconsistent with the national contingency plan and must in the President's belief, have been required in order to protect the public health or welfare or the environment. Thus, in deciding whether a person should be liable for punitive damages, we would expect the courts to examine the particular orders or expenditures from the fund to determine whether they were proper, given the standards of the act and of the national contingency plan, taking into account the fact that a threat to the public was posed by the situation sought to be corrected. If the orders or expenditures were not proper, then certainly no punitive damages should be assessed or they should be proportionate to the demands of equity.

1 Legislative History, 770-771.

One interpretation of the remarks of Senator Stafford, which was adopted by the Aminoil court, holds that a party has "sufficient cause" to refuse to comply with an administrative order only if it was not responsible for the release of the hazardous waste or if it did not have the technical or economic ability to comply. Aminoil, 599 E.Supp. at 73. Such an interpretation, however, is not mandated by the legislative history. Senator Stafford specifically stated that in determining whether to award

punitive damages

We would expect the courts to examine the particular orders or expenditures from the Fund to determine whether they were proper, given the standards of the act and of the national contingency plan.... If the orders or expenditures were not proper, then certainly no punitive damages should be assessed or they should be proportionate to the demands of equity.

1 Legislative History at 771. The reference to the national contingency plan is instructive since one of its requirements is that there be a means of assuring that remedial actions are cost-effective. 42 U.S.C. § 9605(7). Thus, Senator Stafford's comment, that courts could refuse to impose punitive damages because an order issued by an agency was not in accordance with the national contingency plan, can be interpreted to encompass a good faith challenge to the appropriateness (including cost effectiveness) of the proposed remedy.⁴

The requirement that proposed remedial actions be cost-effective is an integral part of the statutory scheme. 42 U.S.C. § 9605(7). It is designed to preserve the limited funds available in the Superfund and ensure that the maximum number of hazardous waste sites are cleaned up with the minimum amount of money. A central issue in Reilly Tar's dispute with the EPA is the cost-effectiveness of the remedy which the EPA has ordered

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That conclusion is buttressed by Senator Stafford's remarks that if the orders were not proper, courts should not impose punitive damages or should reduce the amount of punitive damages as "the demands of equity" require. One could hardly say that it is equitable to impose punitive damages upon a party asserting a good faith defense to the validity of an agency order.

Reilly Tar to perform. It would completely defeat the purpose behind the cost effectiveness provision of CERCLA to hold Reilly Tar liable for punitive damages merely for asserting a good faith, albeit unsuccessful, challenge to the cost-effectiveness of the order. The effect would be virtually to nullify the § 9605(7) cost effectiveness provision.

It is clear that the punitive damages provision of CERCLA is not a mandatory penalty provision. Moreover, this court believes that a good faith defense to the validity of the EPA order is

sufficient to avoid the imposition of punitive damages.⁵ Such an interpretation is consistent with the statute's language as well as its legislative history. The central teaching of the Ex Parte Young line of due process decisions is that a person has a right to challenge the validity of an agency order affecting his affairs without being forced to pay exorbitant penalties. Because § 9607(c)(3) of CERCLA provides such a right to Reilly Tar, due process is satisfied.

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During oral argument on Reilly Tar's motion for a preliminary injunction, the court repeatedly questioned counsel on what would happen if Reilly Tar established at trial that the remedy which the EPA implemented through the use of Superfund money was not cost-effective. Could Reilly Tar avoid payment of that portion which was not cost effective? If not, what is the purpose of the requirement that remedial actions be cost-effective?

In the present case, the government came into court seeking a mandatory injunction requiring Reilly Tar to clean up a hazardous waste site. The government bears the burden of proving in this case that its remedy is appropriate and cost-effective. In other words, Reilly Tar has a right to a de novo determination of the appropriateness and cost-effectiveness of the government's remedy. It would be peculiar, indeed, to conclude that the government could now avoid review of the appropriateness and cost-effectiveness of its proposed remedy by simply issuing an administrative order on the eve of trial.

The court believes that CERCLA should be interpreted to allow a responsible party to avoid payment of remedial expenses if the expenses are not shown to be cost-effective. However, such an interpretation may lead to an anomalous result. If CERCLA is so interpreted, responsible parties will be encouraged to resist agency orders because if a responsible party complies with an agency order there is no right to reimbursement from the government in the event it is later found that the order was not cost-effective. Aminoil, Inc. v. United States E.P.A., 599 F. Supp. 69, 73-74 (C.D. Cal. 1984). On the other hand, permitting a defense of cost-effectiveness would be perfectly consistent with the framework provided for enforcement actions where the government bears the burden of proving the cost-effectiveness of its proposed remedial action.

Due Process and MERLA Penalty Provisions

Minn. Stat. § 115B.18(1) (1984) provides that:

Any person responsible for a release or threatened release from a facility of a pollutant or contaminant which presents an imminent and substantial danger to the public health or welfare or the environment or for a release or threatened release of a hazardous substance from a facility shall forfeit and pay to the state a civil penalty in an amount to be determined by the court of not more than \$20,000 per day for each day that the person fails to take reasonable and necessary response actions....

Id. Section 115B.18(1) clearly provides that the court shall determine the amount, if any, of the penalty to be assessed for noncompliance with an administrative order. Moreover, § 115B.18(1) does not specify the time at which the penalty begins to accrue or the level of culpability required before penalties can be imposed. The obvious implication is that these matters are left to the sound discretion of the court.

In United States v. Reserve Mining Co., 412 F. Supp. 705 (D. Minn. 1976) the District Court for the District of Minnesota interpreted language almost identical to the penalty provision of Minn. Stat. § 115B.18(1). See Minn. Stat. § 115.071(3) (1984). In Reserve, the court examined Minnesota's request that the court impose penalties under § 115.071(3) which provided in part that:

Any person who violates any provision of chapters 115 or 116...shall forfeit and pay to the state a penalty, in an amount to be determined by the court, of not more than \$10,000 per day of violation....

Id. The operative words of § 115.071(3) and § 115B.18(1) are nearly identical.

In determining whether to impose penalties upon Reserve Mining the court broke down Reserve Mining's violations into several categories. United States v. Reserve Mining Co., 412 F.Supp. 705, 707 (D. Minn. 1976). The first category of violations for which the state sought penalties concerned Reserve's violation of Regulation WPC 15 concerning water quality and purity standards. In refusing to impose penalties the court noted that:

Because Reserve, from the outset, has challenged the validity and applicability of WPC 15, imposition of penalties for the many violations of this regulation is not justified.

Reserve Mining, 412 F.Supp. 705, 707 (D. Minn. 1976).

As to another category of violations -- relating to air quality regulations -- the court noted that they were "of a lesser magnitude -- not the kind of acts which normally justify the imposition of punitive damages." Id. The clear implication of the Reserve court's decision is that a good faith challenge to the validity of an agency order is sufficient to avoid the imposition of penalties. This court believes that the penalty provision of MERLA should be interpreted in the same manner as the Reserve court interpreted the penalty provisions found in § 115.071(3). By interpreting § 115B.18(1) to mean that a good faith defense to the validity of the RFRA is sufficient to avoid

the imposition of severe penalties, this court avoids any constitutional difficulty and satisfies the due process concerns of Ex Parte Young.

The State of Minnesota has also moved this court for an order permitting it to amend its Complaint to set forth a cause of action under the Minnesota Environmental Response and Liability Act (MERLA), Minn. Stat. § 115B et. seq. (1984). Rule 15(a) of the Federal Rules of Civil Procedure provides that a party may amend its complaint with leave of court and "leave shall be freely given where justice so requires." Id. This court has examined Reilly Tar's arguments in opposition to the State's motion and concludes that Reilly Tar has not shown that it will be prejudiced by permitting the State's amendment. For these reasons, this court will permit the State of Minnesota to amend its Complaint to state a cause of action under the Minnesota Environmental Response and Liability Act.

CONCLUSION

An examination of the statutory language of CERCLA and its legislative history leads this court to conclude that Reilly Tar can challenge the validity of the EPA order in the enforcement action that will take place before this court⁶ without being forced into paying exorbitant penalties if its challenge is

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The court would note that the EPA has recently reported to this court that it is going to use Superfund money to clean up at least part of the Reilly Tar site. To the extent the EPA pays for the cleanup, the action before this court begins to resemble a cost recovery action.

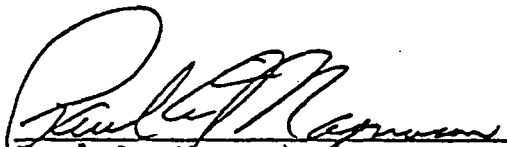
rejected. The state statutory scheme leads this court to a similar conclusion. Therefore, the punitive damages provision of CERCLA, 42 U.S.C. § 9607(c)(3) as well as the penalty provision of MERLA, Minn. Stat. § 715B.18(1) (1984) do not fall within the ambit of Ex Parte Young and those provisions survive Reilly Tar's constitutional attack.

Because this court concludes that the statutory provisions under attack in the present case are constitutional, Reilly Tar has failed to meet the requirements for a preliminary injunction set forth in Dataphase Systems, Inc. v. C. L. Systems, Inc., 640 F.2d 709 (8th Cir. 1981). Moreover, this court will not issue a comparable order under the All Writs Act. 28 U.S.C. § 1651.

For the reasons set forth above, IT IS ORDERED that:

1. Reilly Tar's motion for a preliminary injunction is denied.
2. The State of Minnesota is granted leave to amend its Complaint.

Dated: April 5, 1985.


Paul A. Magnuson
United States District Judge